



The University of Chicago

FOUNDED BY JOHN D. ROCKEFELLER

CIRCULAR OF INFORMATION

VOL. XIX

MAY 1919

No. 5

RUSH MEDICAL COLLEGE

SEVENTY-SEVENTH ANNUAL ANNOUNCEMENT



THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

Published by the University of Chicago six times a year: September, February, March, April, May, June
Entered as second-class matter September 18, 1914, at the Post-office at Chicago, Ill.,
under the Act of August 24, 1912

TABLE OF CONTENTS

Calendar of Rush Medical College	4
Calendar of the University for the Year 1919-20	5
Rush Medical College, in Affiliation with the University of Chicago	
History	7
Government	7
Affiliation	8
Location	8
Location of the University of Chicago	8
The Board of Trustees of Rush Medical College	9
The Faculty of Rush Medical College	9
Fellows for 1919-20	20
Extra-mural Instructors	20
Officers of Administration	21
The Administrative Board of Medical Affairs	22
Introductory Statement	23
General Regulations	25
The Curriculum	27
Requirements for Admission to the Medical College	27
A. High-School Work Required for Admission to the Junior College (Freshman Class), University of Chicago	27
B. College Work Required for Admission to the Medical Courses	29
C. Requirements for the Combined Course for the Degrees of S.B. and M.D.	30
Total Requirements for the Baccalaureate Degrees	31
Requirements for the Associate's Title	31
Requirements for a Bachelor's Degree	31
Admission to Advanced Standing in the Medical Courses	32
Requirements for Graduation	32
General Information for Students Entering the Freshman and Sophomore Classes	33
Routine of Entrance	33
Fees for Matriculation, Tuition, Deposits, and Apparatus	34
Rooms, Board, and General Expenses	36
General Information for Students Entering the Junior and Senior Classes at Rush Medical College	37
Physician's Fee	38
Young Men's Christian Association	39
The Quarter System	39
The Medical Curriculum as Related to the Quarter System	40
The Summer Quarter	40
Definition of Major and Minor	40
Graduate Courses in Medicine for Physicians (and Advanced Students	41
The Work of the Medical Course for the Freshman and Sophomore Years	41
Arrangement of Courses for Six Quarters	42
The Work of the Clinical Years	43
Fifth Year	44

I. Department of Anatomy	44
Department of Zoölogy	46
II. Department of Physiology	50
IIA. Department of Physiological Chemistry and Pharmacology	52
III. Department of Chemistry, Materia Medica, and Toxicology	56
V. Department of Therapeutics and Preventive Medicine	62
VI. Department of Pathology	63
VIA. Department of Hygiene and Bacteriology	65
VII. Department of Medicine	68
VIII. Department of Surgery	74
IX. Department of Obstetrics and Gynecology	78
X. Department of Laryngology and Otology	80
XI. Department of Ophthalmology	81
XII. Department of Skin and Venereal Diseases	83
XIII. General Lectures and Optional Courses	84
Laboratories, Equipment, and Libraries at the University of Chicago:	
The Hull Biological Laboratories	85
The Howard Taylor Ricketts Laboratory	86
The Kent Chemical Laboratory	86
The Libraries	87
Buildings, Equipment, and Hospital Facilities at Rush Medical College	87
Fellowships, Hospital Internes, and Prizes (at Rush Medical College)	93
Scholarships and Other Aid (at the University of Chicago)	95
Fellowships	99
Medical Societies	100
Alumni Association	101
Graduates for the Session of 1918-19	102
Matriculates for the Session of 1918-19	106
Summary of Attendance for the Year 1918-19	126

CALENDAR OF RUSH MEDICAL COLLEGE

1919

June 16, Monday.—Summer Quarter begins.
July 1, Tuesday.—The Fiscal Year of the College begins.
July 4, Friday.—Independence Day: a holiday.
July 24, Thursday.—Second Term, Summer Quarter begins.
Aug. 29, 30, Friday, Saturday.—Quarterly Examinations.
Aug. 30, Saturday.—Summer Quarter ends.
Sept. 1–Sept. 30.—Summer Recess.
Oct. 1, Wednesday.—Autumn Quarter begins.
Nov. 10, Monday.—Second Term, Autumn Quarter begins.
Nov. 27, Thursday.—Thanksgiving Day: a holiday.
Dec. 18, 19, 20, Thursday, Friday, Saturday.—Quarterly Examinations.
Dec. 20, Saturday.—Autumn Quarter ends.
Dec. 21–Jan. 1.—Quarterly Recess.

1920

Jan. 2, Friday.—Winter Quarter begins.
Feb. 9, Monday.—Second Term, Winter Quarter begins.
March 18, 19, 20, Thursday, Friday, Saturday.—Quarterly Examinations.
March 20, Saturday.—Winter Quarter ends.
March 23–March 28.—Quarterly Recess.
March 29, Monday.—Spring Quarter begins.
May 6, Thursday.—Second Term, Spring Quarter begins.
June 14, Monday.—Special Clinics for the Alumni Association.
June 15, Tuesday.—Special Clinics.
June 16, Wednesday.—3:00 P.M., Graduating Exercises; 5:00 P.M., Annual Business Meeting of the Alumni Association; 6:00 P.M., Annual Reception and Dinner of the Faculty and Alumni.
June 17, 18, 19, Thursday, Friday, Saturday.—Quarterly Examinations.
June 19, Saturday.—Spring Quarter ends.

UNIVERSITY CALENDAR FOR THE YEAR 1919-20

1919

June 8	Sunday	Convocation Sunday
June 9	Monday	College Day
June 10	Tuesday	Summer Convocation
June 11	Wednesday	} Examinations for the Spring Quarter
June 12	Thursday	
June 13	Friday	
June 13	Friday	Spring Quarter ends
June 14	Saturday	Registration for the Summer Quarter
June 16	Monday	<i>Summer Quarter begins</i>
June 16-21		Examinations of the College Entrance Examination Board
July 4	Friday	Independence Day: a holiday
July 12	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence
July 22	Tuesday	} Examinations for the First Term of the Summer Quarter
July 23	Wednesday	
July 23	Wednesday	First Term of the Summer Quarter ends
July 24	Thursday	Second Term of the Summer Quarter begins
Aug. 24	Sunday	Convocation Sunday
Aug. 28	Thursday	} Examinations for the Second Term of the Summer Quarter
Aug. 29	Friday	
Aug. 29	Friday	} Autumn Convocation Summer Quarter ends
Sept. 1-6		
Sept. 29	Monday	} Registration for the Autumn Quarter
Sept. 30	Tuesday	
Sept. 30	Tuesday	
		Special Examinations for all students returning for the Autumn Quarter, who incurred deficiencies (work reported conditioned or incomplete) in the last quarter of residence
Oct. 1	Wednesday	<i>Autumn Quarter begins: all classes meet</i>
Nov. 27	Thursday	Thanksgiving Day: a holiday
Dec. 21	Sunday	Convocation Sunday
Dec. 19	Friday	} Examinations for the Autumn Quarter
Dec. 22	Monday	
Dec. 23	Tuesday	
Dec. 23	Tuesday	Winter Convocation, Autumn Quarter ends

1920

Jan. 2	Friday	<i>Winter Quarter begins</i>
Jan. 24	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence

Feb. 12	Thursday	Lincoln's Birthday: a holiday
Mar. 14	Sunday	Convocation Sunday
Mar. 16	Tuesday	Spring Convocation
Mar. 17	Wednesday	} Examinations for the Winter Quarter
Mar. 18	Thursday	
Mar. 19	Friday	
Mar. 19	Friday	
Mar. 20-28		Winter Quarter ends
		Quarterly Recess
Mar. 29	Monday	<i>Spring Quarter begins</i>
April 24	Saturday	Special Examinations for removal of deficiencies (work reported conditioned or incomplete) incurred during the last quarter of residence
May 7	Friday	} Annual Conference with Co-operating Schools
May 8	Saturday	
June 13	Sunday	Convocation Sunday
June 14	Monday	College Day
June 15	Tuesday	Summer Convocation
June 16	Wednesday	} Examinations for the Spring Quarter
June 17	Thursday	
June 18	Friday	
June 18	Friday	
		Spring Quarter ends

RUSH MEDICAL COLLEGE
IN AFFILIATION WITH
THE UNIVERSITY OF CHICAGO

HISTORY

Rush Medical College is one of the oldest institutions of learning in the Northwest, having been chartered by a special act of the legislature of the state of Illinois in February, 1837. It was founded by the late Daniel Brainerd, who was its first president. The first course of lectures was delivered in the second story of a frame building on Clark Street, near Randolph, in 1843. In 1844 a college building was erected at the corner of Dearborn Avenue and Indiana Street (now Grand Avenue), a structure which was remodeled and enlarged in 1855. In 1867 a larger building was erected on the site of the old one. This edifice was destroyed in the great fire of 1871 and for three years the College occupied a temporary amphitheater in the grounds of the Cook County Hospital, then located at Arnold and Eighteenth streets. In 1875 the present Clinical Building was erected, and in 1893 a Laboratory Building, which greatly increased the facilities for practical instruction, was erected on the south side of Harrison Street, opposite the Clinical Building. The facilities for clinical instruction were largely increased in 1903 by the addition of the Senn Building, seven stories in height, adjoining the Clinical Building on the east. In 1887 the College became the medical department of Lake Forest University, retaining, however, its autonomy. This relation was dissolved by mutual consent in April, 1898, and in the same month the present affiliation with the University of Chicago was established. In 1883 the Presbyterian Hospital, adjoining the College, was established, and the building then erected for the hospital was subsequently enlarged by the addition of the Daniel A. Jones Memorial and other additions. In 1908 an affiliation was entered into with the Children's Memorial Hospital similar to that obtaining with the Presbyterian Hospital; in 1911 a similar affiliation was entered into with the Home for Destitute Crippled Children, and in 1915 with the County Home for Convalescent Children and with the St. Joseph's Hospital. Rush Medical College is one of the several institutions officially recognized by the Royal Colleges of Physicians and of Surgeons of London, England.

GOVERNMENT

The government of the College is vested in a "perpetual Board of Trustees" distinct from the teaching force of the College, which was constituted by a special act of the General Assembly of Illinois, in February, 1837, and of which the Governor of the state, the Lieutenant-Governor, and the Speaker of the House of Representatives are members *ex officio*. This board is responsible to the state for the careful management of the financial and educational interests of the College and for the discipline of its students.

AFFILIATION

By the terms of affiliation with the University of Chicago, the Board of Trustees is composed of members not belonging to the teaching force of the College. This board assumes the financial management and appoints the Faculty, but delegates to the latter the control of the educational work subject to the rules of the University and the approval of the Trustees. The affiliation thus assures the maintenance of a higher order of instruction and a steady advance in modern educational methods. The University offers three Fellowships to graduates of the College, yielding the University fees and entitling the holders to the privileges of its biological laboratories. It provides for granting the degree of Bachelor of Science to students of the College who have had suitable preliminary education and who comply with the University regulations established for that degree. The courses of the first two years of the medical curriculum are offered at the University only.

LOCATION

The College is situated on West Harrison Street, between Hermitage Avenue and Wood Street, and can be reached by any of the trains of the Metropolitan Elevated Railway, the Marshfield Avenue station of which is three blocks east of the College; by the Ogden Avenue and Van Buren Street electric lines, which cross Wood Street two blocks north of the College; or by the Harrison Street electric car line, which runs on West Harrison Street.

The telephone number is West 110.

Address all correspondence to RUSH MEDICAL COLLEGE, Chicago, Illinois.

LOCATION OF THE UNIVERSITY OF CHICAGO

The University is situated on the Midway Plaisance between Cottage Grove and Dorchester avenues, and can be reached by the Cottage Grove Avenue electric cars (from Wabash Avenue), by the South Side Elevated Railway, by the Illinois Central Railroad to South Park Station, or by the Sixty-third Street electric cars from the Englewood railway stations.

Mail and baggage service is provided at the Information Office in Cobb Lecture Hall.

The telephone number of the University is Midway 800.

THE BOARD OF TRUSTEES OF RUSH MEDICAL COLLEGE

OFFICERS OF THE BOARD

JOHN J. GLESSNER, President	CHARLES L. HUTCHINSON, Treasurer
ERNEST A. HAMILL, Vice-President	JAMES SPENCER DICKERSON, Secretary

ELECTED MEMBERS

JESSE A. BALDWIN	HARRY PRATT JUDSON	JAMES SIMPSON
JOHN J. GLESSNER	ANDREW MACLEISH	FREDERICK A. SMITH
ERNEST A. HAMILL	JOHN T. PIRIE	ALBERT A. SPRAGUE, II
CHARLES L. HUTCHINSON	FREDERICK H. RAWSON	ROBERT J. THORNE

EX-OFFICIO MEMBERS

HIS EXCELLENCY FRANK O. LOWDEN, Governor of Illinois
 HON. JOHN G. OGLESBY, Lieutenant-Governor of Illinois
 HON. DAVID E. SHANAHAN, Speaker of the House of Representatives

THE FACULTY OF RUSH MEDICAL COLLEGE

REPRESENTING THE UNIVERSITY OF CHICAGO

HARRY PRATT JUDSON, A.M., LL.D., President of the University.

NORMAN BRIDGE, A.M., M.D., Emeritus Professor of Medicine, Los Angeles, Cal.
 WALTER STANLEY HAINES, A.M., M.D., Professor and Head of the Department of Chemistry, Materia Medica, and Toxicology, Rush Medical College.

ARTHUR DEAN BEVAN, M.D., *Nicholas Senn* Professor and Head of the Department of Surgery, 122 South Michigan Boulevard.

JOHN MILTON DODSON, A.M., M.D., Dean of Students; Professor of Medicine (Pediatrics), 25 East Washington Street.

LUDVIG HEKTOEN, M.D., Sc.D., Professor and Head of the Department of Pathology, 637 South Wood Street.

FRANK BILLINGS, Sc.D. (Harv.), M.D., Dean of the Faculty; Professor and Head of the Department of Medicine; Professor of Medicine in the University of Chicago, 122 South Michigan Boulevard.

JOHN CLARENCE WEBSTER, M.D., F.R.C.P. (Edin.), Professor and Head of the Department of Obstetrics and Gynecology, 104 South Michigan Boulevard.

ALBERT ABRAHAM MICHELSON, Ph.D., Professor and Head of the Department of Physics, University of Chicago.

JAMES BRYAN HERRICK, A.M., M.D., Professor of Medicine, 122 South Michigan Boulevard.

- MARION TALBOT, A.M., Professor of Household Administration; Dean of Women, University of Chicago.
- JULIUS STIEGLITZ, PH.D., Sc.D., Chairman of the Department of Chemistry; Professor of Chemistry; Director of Analytical Chemistry, University of Chicago.
- EDWIN OAKES JORDAN, PH.D., Chairman of the Department of Hygiene and Bacteriology; Professor of Bacteriology, University of Chicago.
- ROBERT RUSSELL BENSLEY, A.B., M.B., Professor of Anatomy, University of Chicago.
- FRANK RATTRAY LILLIE, PH.D., Chairman of the Department of Zoölogy; Professor of Embryology, University of Chicago.
- CHARLES JUDSON HERRICK, PH.D., Professor of Neurology, University of Chicago.
- BERTRAM WELTON SIPPY, M.D., Professor of Medicine, 122 South Michigan Boulevard.
- WILLIAM HAMLIN WILDER, M.D., Comptroller and Professor and Head of the Department of Ophthalmology, 122 South Michigan Boulevard.
- EDWIN RAYMOND LECOUNT, M.D., Professor of Pathology, Rush Medical College.
- DAVID WILSON GRAHAM, A.M., M.D., Clinical Professor of Surgery, 15 East Washington Street.
- WILLIAM THOMAS BELFIELD, M.D., Professor of Surgery (Genito-urinary), 32 North State Street.
- THOR ROTHSTEIN, M.D., Professor of Medicine (Nervous and Mental Diseases), 122 South Michigan Boulevard.
- HARRY GIDEON WELLS, M.D., PH.D., Professor of Pathology, University of Chicago.
- OLIVER SAMUEL ORMSBY, M.D., Secretary of the Council of Administration and of the Faculty; Professor and Head of the Department of Skin and Venereal Diseases, 25 East Washington Street.
- THEODORE TIEKEN, M.D., *Ingals* Professor of Therapeutics, 30 North Michigan Boulevard.
- JOHN EDWIN RHODES, A.M., M.D., College Historian; Professor of Laryngology and Otology, 122 South Michigan Boulevard.
- *ANTON JULIUS CARLSON, PH.D., Professor of Physiology and Chairman of the Department, University of Chicago.
- GEORGE ELMER SHAMBAUGH, PH.B., M.D., Professor of Laryngology and Otology, 122 South Michigan Boulevard.
- CHARLES MANNING CHILD, PH.D., Professor of Zoölogy, University of Chicago.
- WILLIAM DRAPER HARKINS, PH.D., Professor of Chemistry, University of Chicago.
- HORATIO HACKETT NEWMAN, PH.D., Dean in the Colleges of Science; Professor of Zoölogy and Embryology, University of Chicago.
- BASIL COLEMAN HARVEY, A.B., M.B., Professor of Anatomy, University of Chicago.
- PRESTON KYES, A.M., M.D., Professor of Preventive Medicine, University of Chicago.
- GEORGE HOWITT WEAVER, M.D., Professor of Pathology, 637 South Wood Street.

* Absent in the service of the United States.

JOSEPH LEGGETT MILLER, M.D., Professor of Medicine, 122 South Michigan Boulevard.

SAMUEL ROBERT SLAYMAKER, A.B., M.D., Professor of Medicine, 25 East Washington Street.

JOSEPH ALMARIN CAPPS, A.M., M.D., Professor of Medicine, 122 South Michigan Boulevard.

*DEAN DEWITT LEWIS, A.B., M.D., Professor of Surgery, 122 South Michigan Boulevard.

RUDOLPH WIESER HOLMES, M.D., Associate Professor of Obstetrics and Gynecology, 122 South Michigan Boulevard.

SIDNEY KUH, M.D., Associate Professor of Medicine (Nervous and Mental Diseases), 30 North Michigan Boulevard.

BIRD MCPHERSON LINNELL, A.B., M.D., Associate Professor of Medicine, 25 East Washington Street.

JAMES CORNELIUS GILL, M.D., Associate Professor of Medicine (Nervous and Mental Diseases), 104 South Michigan Boulevard.

GEORGE WASHINGTON HALL, A.M., M.D., Associate Professor of Medicine (Nervous and Mental Diseases), 104 South Michigan Boulevard.

PETER BASSOE, M.D., Associate Professor of Medicine (Nervous and Mental Diseases), 30 North Michigan Boulevard.

SAMUEL AMBERG, M.D., Associate Professor of Experimental Medicine, Children's Memorial Hospital.

HERMAN IRVING SCHLESINGER, Ph.D., Associate Professor of Chemistry, University of Chicago.

BERNARD FANTUS, A.M., M.D., Associate Professor of Therapeutics, 719 South Ashland Boulevard.

*EDWIN WARNER RYERSON, M.D., Associate Professor of Surgery (Orthopedic), 122 South Michigan Boulevard.

WILBER E. POST, M.D., Associate Professor of Medicine, 122 South Michigan Boulevard.

✓ ERNEST EDWARD IRONS, M.D., Ph.D., Associate Professor of Medicine, 122 South Michigan Boulevard.

GEORGE WILLIAM BARTELMEZ, Ph.D., Associate Professor of Anatomy, University of Chicago.

ELBERT CLARK, S.B., M.D., Ph.D., Associate Professor of Anatomy, University of Chicago.

*JOHN RICH McDILL, M.D., Lecturer on Surgery (Tropical Diseases).

DAVID JUDSON LINGLE, Ph.D., Assistant Professor of Physiology, University of Chicago.

CHARLES AUBREY PARKER, M.D., Assistant Professor of Surgery (Orthopedic), 7 West Madison Street.

ALBERT BELCHAM KEYES, M.D., Assistant Professor of Obstetrics and Gynecology, 122 South Michigan Boulevard.

NORMAN MACLEOD HARRIS, M.B., Assistant Professor of Bacteriology, University of Chicago.

GEORGE ABRAHAM TORRISON, A.B., M.D., Assistant Professor of Laryngology and Otology, 30 North Michigan Boulevard.

* Absent in the service of the United States.

- *RALPH WALDO WEBSTER, M.D., Ph.D., Assistant Professor of Pharmacological Therapeutics; Instructor in Medicine, 25 East Washington Street.
- JOSEPHINE ESTABROOK YOUNG, M.D., Assistant Professor of Medicine (Nervous and Mental Diseases), 7 West Madison Street.
- ELMER LAWTON KENYON, A.B., M.D., Assistant Professor of Laryngology and Otology, 104 South Michigan Boulevard.
- *JAMES MURRAY WASHBURN, A.B., M.D., Assistant Professor of Medicine, 122 South Michigan Boulevard.
- MILTON MOSES PORTIS, M.D., Assistant Professor of Medicine, 104 South Michigan Boulevard.
- LUDWIG MANNHEIMER LOEB, M.D., Assistant Professor of Medicine, 30 North Michigan Boulevard.
- *SAMUEL JOHNSON WALKER, M.D., Assistant Professor of Medicine (Pediatrics), 125 East Chicago Avenue.
- HENRY FREDERICK HELMHOLZ, M.D., Assistant Professor of Medicine (Pediatrics), 104 South Michigan Boulevard.
- ALEXANDER FRANCIS STEVENSON, M.D., Assistant Professor of Medicine, 104 South Michigan Boulevard.
- ROLLIN TURNER WOODYATT, M.D., Assistant Professor of Medicine, 104 South Michigan Boulevard.
- JOHN RITTER, M.D., Assistant Professor of Medicine, 3124 West Washington Boulevard.
- LEON BLOCH, M.D., Assistant Professor of Medicine, 25 East Washington Street.
- ELLIS KIRK KERR, M.D., Assistant Professor of Medicine, 30 North Michigan Boulevard.
- *SIDNEY STRAUSS, M.D., Assistant Professor of Medicine, 5039 Michigan Avenue.
- KARL KONRAD KOESSLER, M.D., Assistant Professor of Medicine, 104 South Michigan Boulevard.
- FRANK WESLEY ALLIN, M.D., Assistant Professor of Medicine (Pediatrics), 4403 Washington Boulevard.
- CLIFFORD GROSSELLE GRULEE, A.M., M.D., LL.D., Assistant Professor of Medicine (Pediatrics), 104 South Michigan Boulevard.
- ERNEST LEWIS McEWEN, S.M., M.D., Assistant Professor of Skin and Venereal Diseases, 25 East Washington Street.
- CAREY CULBERTSON, M.D., Assistant Professor of Obstetrics, 30 North Michigan Boulevard.
- CARL BRADEN DAVIS, S.B., M.D., Assistant Professor of Surgery, 122 South Michigan Boulevard.
- FREDERICK BROWN MOOREHEAD, M.D., D.D.S., Assistant Professor of Surgery (Oral and Dental), 122 South Michigan Boulevard.
- *WILLIAM GEORGE LEE, M.D., Assistant Professor of Obstetrics and Gynecology, 4557 Broadway.
- NOBLE SPROAT HEANEY, M.D., Assistant Professor of Obstetrics and Gynecology, 104 South Michigan Boulevard.
- STANTON ABELES FRIEDBERG, M.D., Assistant Professor of Laryngology and Otology, 104 South Michigan Boulevard.

* Absent in the service of the United States.

- ARNO BENEDICT LUCKHARDT, M.D., Ph.D., Assistant Professor of Physiology, University of Chicago.
- FRED KONRAD KOCH, Ph.D., Acting Chairman of the Department and Assistant Professor of Physiological Chemistry, University of Chicago.
- WALTER WILE HAMBURGER, M.D., Assistant Professor of Medicine, 104 South Michigan Boulevard.
- DAVID FISKE, M.D., Assistant Professor of Laryngology and Otology, 25 East Washington Street.
- JOHN BERNARD ELLIS, M.D., Assistant Professor of Ophthalmology, 25 East Washington Street.
- GEORGE WILLIAM BOOT, M.D., Assistant Professor of Laryngology and Otology, 122 South Michigan Boulevard.
- FRANCIS LANE, M.D., Assistant Professor of Ophthalmology, 25 East Washington Street.
- GEORGE FREDERICK DICK, M.D., Assistant Professor of Pathology, 122 South Michigan Boulevard.
- ROBERT SONNENSCHNEIN, M.D., Assistant Professor of Laryngology and Otology, 29 East Madison Street.
- THOMAS WILLIAMS LEWIS, S.B., M.D., Assistant Professor of Laryngology and Otology, 4557 Broadway.
- ARCHIBALD HOYNE, M.D., Assistant Professor of Medicine, 25 East Washington Street.
- WILLARD WOODARD DICKER, M.D., Assistant Professor of Medicine, 5611 South Boulevard, Austin.
- RALPH CRISSMAN BROWN, M.D., Assistant Professor of Medicine, 122 South Michigan Boulevard.
- JOHN FOOTE NORTON, Ph.D., Assistant Professor of Bacteriology, University of Chicago.
- JOHN L. JACQUE, M.D., Assistant Professor of Medicine, 5 South Wabash Avenue.
- ROBERT HARRY HERBST, M.D., Assistant Professor of Surgery (Genito-urinary), 32 North State Street.
- HERMAN LOUIS KRETSCHMER, M.D., Assistant Professor of Surgery (Genito-urinary), 122 South Michigan Boulevard.
- PAUL OLIVER, M.D., Assistant Professor of Surgery, 104 South Michigan Boulevard.
- *GEORGE GILBERT DAVIS, M.D., Assistant Professor of Surgery, 122 South Michigan Boulevard.
- ISABELLA HERB, M.D., Assistant Professor of Surgery (Anesthetics), Presbyterian Hospital.
- *DALLAS BALDWIN PHEMISTER, M.D., Assistant Professor of Surgery, 122 South Michigan Boulevard.
- CHARLES GILCHRIST DARLING, M.D., Assistant Professor of Ophthalmology, 122 South Michigan Boulevard.
- WILLIAM GEORGE REEDER, M.D., Assistant Professor of Ophthalmology, 25 East Washington Street.
- JOHN WILLIAM EDWARD GLATTFELD, Ph.D., Assistant Professor of Chemistry, University of Chicago.

* Absent in the service of the United States.

- ETHEL MARY TERRY, PH.D., Assistant Professor of Analytical Chemistry, University of Chicago.
- CHARLES HENRY SWIFT, S.B., M.D., Assistant Professor of Anatomy, University of Chicago.
- MORRIS MILLER WELLS, PH.D., Assistant Professor of Zoölogy, University of Chicago.
- VICTOR LUPU SCHRAGER, M.D., Assistant Professor of Surgery, 3300 Douglas Boulevard.
- ARTHUR LAURIE TATUM, M.D., PH.D., Assistant Professor of Pharmacology, University of Chicago.
- GERALD LOUIS WENDT, PH.D., Assistant Professor of Chemistry and Acting Curator, University of Chicago.
- WILLIAM J. CROZIER, PH.D., Assistant Professor of Zoölogy, University of Chicago.
- FRED TERRY ROGERS, PH.D., Assistant Professor of Physiology, University of Chicago.
- *HARRY EDGAR MOCK, M.D., Assistant Professor of Medicine (Industrial), 122 South Michigan Boulevard.
- WILLIAM AUGUSTUS QUINN, M.D., Instructor in Skin and Venereal Diseases, 122 South Michigan Boulevard.
- *ROBERT JAMES GAY, M.D., Instructor in Therapeutics, 30 North Michigan Boulevard.
- *ARTHUR ATWELL SMALL, M.D., Instructor in Medicine, 25 East Washington Street.
- DANIEL ROBERTS BROWER, M.D., Instructor in Therapeutics, 104 South Michigan Boulevard.
- HARRIET FAY HOLMES, A.B., Special Instructor in Pathological Technique, University of Chicago.
- *EVARTS AMBROSE GRAHAM, M.D., Instructor in Surgery.
- VERNON CYRENIUS DAVID, M.D., Instructor in Surgery, 25 East Washington Street.
- EDWARD JAMES LEWIS, M.D., Instructor in Surgery, 25 East Washington Street.
- DANIEL BERNARD HAYDEN, A.M., M.D., Instructor in Laryngology and Otology, 122 South Michigan Boulevard.
- HENRY H. EVERETT, M.D., Instructor in Laryngology and Otology, 30 North Michigan Boulevard.
- ROGER THROOP VAUGHAN, M.D., Instructor in Surgery, 30 North Michigan Boulevard.
- *HENRY PATTERSON BAGLEY, M.D., Instructor in Laryngology and Otology, 31 North State Street.
- FRANZ HEINRICH HARMS, M.D., Instructor in Obstetrics and Gynecology, 25 East Washington Street.
- JOHN CHARLES WILLIAMS, M.D., Instructor in Laryngology and Otology, 815 Belden Avenue.
- JOHN HANCOCK MCCLELLAN, M.D., PH.D., Instructor in Medicine, 122 South Michigan Boulevard.

* Absent in the service of the United States.

- MARY M. S. JOHNSTONE, M.D., Instructor in Obstetrics and Gynecology, 1703 West Jackson Boulevard.
- JAMES RICHARD GREER, M.D., Instructor in Medicine, 122 South Michigan Boulevard.
- GUSTAVE LEONARD KAUFFMAN, M.D., Instructor in Medicine (Pediatrics), 747 Fullerton Avenue.
- RICHARD FISSON AUSTIN, M.D., Instructor in Pathology; Resident Pathologist, Children's Memorial Hospital.
- HOMER KING NICOLL, M.D., Instructor in Pathology; Serologist of the Presbyterian Hospital.
- EDWARD MCGINNIS, M.D., Instructor in Laryngology and Otology, 104 South Michigan Boulevard.
- JOHN JOSEPH ALDERSON, M.D., Instructor in Medicine, 607 Blue Island Avenue.
- † WILLIAM FREDERICK DEY, M.D., Instructor in Medicine (Nervous and Mental Diseases), LaGrange, Ill.
- AUGUST STRAUCH, M.D., Instructor in Medicine (Pediatrics), 4557 Broadway.
- DONALD PUTNAM ABBOTT, M.D., Instructor in Medicine, 122 South Michigan Boulevard.
- RUSSELL MORSE WILDER, M.D., PH.D., Instructor in Medicine, 122 South Michigan Boulevard.
- WILLIS EUGENE GOUWENS, Curator in Chemistry, University of Chicago.
- BENJAMIN FRANKLIN DAVIS, M.D., PH.D., Instructor in Surgery, 122 South Michigan Boulevard.
- LEO FINKELSTEIN, S.B., Instructor in General Chemistry, University of Chicago.
- ARTHUR NORTON MACKEY, M.D., Instructor in Dermatology, 3420 Sheffield Avenue.
- CARL RICHARD MOORE, M.D., Instructor in Zoölogy, University of Chicago.
- JOSEPH L. BAER, M.D., Instructor in Obstetrics and Gynecology, 104 South Michigan Boulevard.
- HARRY G. HARDT, M.D., Instructor in Medicine, 6800 Constance Avenue.
- WILLIAM FRANCIS HEWITT, M.D., Instructor in Obstetrics and Gynecology, 122 South Michigan Boulevard.
- EDWARD ALLEN OLIVER, M.D., Instructor in Dermatology, 25 East Washington Street.
- WALTER H. O. HOFFMANN, M.D., Instructor in Medicine (Pediatrics), 122 South Michigan Boulevard.
- * WALTER FRITZ WINHOLT, M.D., Instructor in Medicine (Pediatrics), 25 East Washington Street.
- CLARK OWEN MELICK, Instructor in Anatomy, University of Chicago.
- ASHER F. SIPPY, M.D., Instructor in Medicine, 122 South Michigan Boulevard.
- WALTER HOWARD MEENTS, M.D., Instructor in Surgery, 122 South Michigan Boulevard.
- ALBERT HERR MONTGOMERY, M.D., Instructor in Surgery, 6205 Broadway.
- FRANKLIN BENEDICT MCCARTY, M.D., Instructor in Surgery, 5536 Sheridan Road.
- * FREDERICK WILLIAM GAARDE, M.D., Instructor in Medicine, 122 South Michigan Boulevard.

* Absent in the service of the United States.

† Absent in the service of the British army.

EDWIN NORTON MILLER, M.D., Instructor in Surgery, 122 South Michigan Boulevard.

GATEWOOD, M.D., Instructor in Surgery and House Surgeon, Presbyterian Hospital.

GEORGE THOMAS CALDWELL, PH.D., Instructor in Pathology, University of Chicago.

GOLDER L. MCWHORTER, M.D., PH.D., Instructor in Surgery, 122 South Michigan Boulevard.

*JAMES HERBERT MITCHELL, M.D., Instructor in Dermatology, 25 East Washington Street.

FRANK L. DE BEUKELAER, A.M., Instructor in Chemistry, University of Chicago.

PAUL ROBERT CANNON, A.B., Instructor in Bacteriology, University of Chicago.

JOHN EVERETT GORDON, S.B., Instructor in Bacteriology, University of Chicago.

MARION HINES, PH.D., Instructor in Anatomy, University of Chicago.

HOWARD MARTIN SHEAFF, A.B., Instructor in Physiological Chemistry, University of Chicago.

ANDREW CONWAY IVY, PH.D., Instructor in Physiology, University of Chicago.

HOLLIS ELMER POTTER, M.D., Lecturer on Radiology, 122 South Michigan Boulevard.

MAURICE BRAUDE, M.D., Associate in Medicine (Nervous and Mental Diseases), 1100 Independence Boulevard.

ALFRED MARVIN HALL, M.D., Associate in Clinical Ophthalmology, 25 East Washington Street.

*FREDERICK OLAF FREDERICKSON, M.D., Associate in Medicine, 5937 Broadway.

ERNEST WILLIAM POTTHOFF, M.D., Associate in Dermatology, 746 South Elmwood Avenue, Oak Park.

SIGSMUND FRANKLIN WATERMAN, M.D., Associate in Medicine, 2758 West Madison Street.

GEORGE EDWARD BAXTER, M.D., Associate in Medicine (Pediatrics), 4603 Broadway.

JOHN FRANK WAUGH, M.D., Associate in Dermatology, 25 East Washington Street.

*ROBERT S. BERGHOFF, M.D., Associate in Medicine, 122 South Michigan Boulevard.

GEORGE HOWELL COLEMAN, M.D., Associate in Medicine, 122 South Michigan Boulevard.

CLAUDE ALLEN LINK, M.D., Associate in Medicine, 1623 West Van Buren Street.

FRANK AMOS CHAPMAN, M.D., Associate in Medicine, 30 North Michigan Boulevard.

CECIL THEODOR HEIDEL, M.D., Associate in Medicine (Pediatrics), 747 Fullerton Parkway.

RICHARD W. WATKINS, S.B., Associate in Anatomy, University of Chicago.

FREDERIC WILLIAM ROHR, M.D., Associate in Obstetrics and Gynecology, 2200 Irving Park Boulevard.

CLIFFORD PORTER McCULLOUGH, M.D., Associate in Medicine, 122 South Michigan Boulevard.

FRED M. SMITH, M.D., Associate in Medicine, 122 South Michigan Boulevard.

* Absent in the service of the United States.

- OSCAR ELLIS CHASE, M.D., Associate in Medicine (Pediatrics), 4601 Broadway.
LINN FREDERICK McBRIDE, A.B., M.D., Associate in Medicine, Presbyterian Hospital.
GEORGIANA DVORAK THEOBALD, M.D., Associate in Ophthalmology, 25 East Washington Street.
EDWARD CHARLES MASON, A.B., Associate in Pharmacology, University of Chicago.
FREDERICK F. BLICKE, S.B., S.M., Research Associate in Chemistry, University of Chicago.
ALBERT W. BELLOMY, S.B., Associate in Zoölogy, University of Chicago.
MARY MEDA RISING, S.B., Associate in Chemistry, University of Chicago.
EMMA KOHMAN, S.B., Associate in Physiology, University of Chicago.
WILLIAM DUNCAN McNALLY, A.B., Associate in Materia Medica and Toxicology, 3734 North Harding Avenue.
WILLIAM DAYHUFF SANBURN, M.D., Associate in Medicine, 104 South Michigan Boulevard.
JOHN VINCENT LAWRENCE, S.B., Associate in Physiological Chemistry, University of Chicago.
CARROLL ORWIG GETTY, M.D., Associate in Medicine, 104 South Michigan Boulevard.
THEODORE DROSDOWITZ, M.D., Assistant in Surgery (Genito-urinary), 1656 West Twelfth Street.
JOHN ALFRED GRAHAM, M.D., Assistant in Surgery, 30 North Michigan Boulevard.
DAVID C. STRAUSS, M.D., Assistant in Surgery, 5 South Wabash Avenue.
CHARLES OTTO CARLSTROM, G.D., Assistant in Kinesitherapy, 108 North State Street.
EDWIN THOMAS SECOR, M.D., Assistant in Medicine (Nervous and Mental Diseases), LaGrange, Ill.
*CHARLES SCHOTT, M.D., Assistant in Medicine (Pediatrics), 1301 North Clark Street.
THOMAS P. LYNAM, M.D., Assistant in Surgery (Orthopedic), 3959 West Madison Street.
ROBERT ORLANDO RITTER, M.D., Assistant in Surgery (Orthopedic), 1200 North State Street.
JEANNETTE BROWN OBENCHAIN, Ph.B., Technical Assistant in Anatomy, University of Chicago.
LIBBIE HENRIETTA HYMAN, Ph.D., Research Assistant in Zoölogy, University of Chicago.
*HENRY JOHNSON ULLMANN, M.D., Assistant in Medicine, Highland Park.
ARTHUR HENRY PARMELEE, M.D., Assistant in Medicine (Pediatrics), 104 South Michigan Boulevard.
LOUIS DANIEL SMITH, M.D., Assistant in Surgery (Genito-urinary), 25 East Washington Street.
STEFAN HRYNIEWIECKI, M.D., Assistant in Laryngology and Otology, 1518 West Division Street.

* Absent in the service of the United States.

- *HENRY H. KLEINPELL, M.D., Assistant in Medicine (Pediatrics), 48 West Division Street.
- *LORIN C. COLLINS, M.D., Assistant in Medicine (Pediatrics), 25 East Washington Street.
- *SIGURD KRAFT, M.D., Assistant in Medicine (Pediatrics), 125 East Chicago Avenue.
- SAMUEL NYE CLARK, M.D., Assistant in Medicine (Nervous and Mental Diseases), Kankakee, Ill.
- LEE CONNELL GATEWOOD, A.M., M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- MAX BENJAMIN LEVITON, M.D., Assistant in Medicine, 3532 Douglas Boulevard.
- ABRAHAM B. RIMMERMAN, M.D., Assistant in Medicine, 3435 Sheffield Avenue.
- SPENCER CORNELIUS DICKERSON, M.D., Assistant in Laryngology and Otology, 3601 South State Street.
- *JOHN DAYHUFF ELLIS, M.D., Assistant in Medicine (Occupational Diseases), 1042 Wilson Avenue.
- WARREN WALTER EWING, S.B., S.M., Assistant in Chemistry, University of Chicago.
- BURRELL OTTO RAULSTON, M.D., Assistant in Pathology; Resident Pathologist, Presbyterian Hospital.
- *NATHAN SMITH DAVIS, III, M.D., Assistant in Medicine, 7 West Madison Street.
- JOHN FAVILL, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- ISADORE LEON MEYERS, M.D., Assistant in Medicine (Nervous and Mental Diseases), 59 East Madison Street.
- HARRISON W. MALBY, M.D., Assistant in Surgery (Orthopedic), 3958 West Madison Street.
- JACOB MYERS, M.D., Assistant in Surgery (Orthopedic), 104 South Michigan Boulevard.
- ALVIN THOMPSON, M.D., Assistant in Surgery (Genito-urinary), 4 West Ontario Street.
- DANIEL M. EISS, M.D., Assistant in Ophthalmology, 15 East Washington Street.
- LOWELL DELFORD SNORF, M.D., Assistant in Medicine (Industrial), 335 South Central Park Avenue.
- FRANCES E. HAINES, M.D., Assistant in Surgery (Anesthetics), Presbyterian Hospital.
- FREDERICK A. BISDOM, M.D., Assistant in Surgery (Genito-urinary), 1548 Belmont Avenue.
- EARLE B. FOWLER, M.D., Assistant in Ophthalmology, 31 North State Street.
- *THOMAS DYER ALLEN, M.D., Assistant in Ophthalmology, 122 South Michigan Boulevard.
- BERTHA MESERVE SHAFER, M.D., Assistant in Dermatology, Rush Medical College.
- CELESTIN BENNO SEMERAK, M.D., Assistant in Pathology, Rush Medical College.
- HARRY MONTGOMERY WETTER, S.M., Assistant in Bacteriology, University of Chicago.
- CHARLES M. BACON, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- LEO LOUIS HARDT, M.D., Assistant in Medicine, 122 South Michigan Boulevard.

* Absent in the service of the United States.

- WILLIAM ALEXANDER THOMAS, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- VICTORIA C. A. BERGSTROM, M.D., Assistant in Medicine (Pediatrics), 108 North State Street.
- CHARLES MERRILL ROSE, M.D., Assistant in Surgery, 25 East Washington Street.
- LEIGH FESTUS WATSON, M.D., Assistant in Surgery, 30 North Michigan Boulevard.
- EDWARD WALTER WESTLAND, M.D., Assistant in Surgery, 932 North Laramie Avenue.
- PAUL C. FOX, M.D., Assistant in Obstetrics and Gynecology, 25 East Washington Street.
- JAMES H. GREGORY, M.D., Assistant in Laryngology and Otology, 132 North Oak Park Avenue, Oak Park, Ill.
- FLOYD F. THOMPSON, M.D., Assistant in Laryngology and Otology, 32 North State Street.
- T. H. LIGGETT, S.B., Assistant in Chemistry, University of Chicago.
- NICHOLAS D. CHERVIUS, S.B., Assistant in Chemistry, University of Chicago.
- FREDERICK WILLIAM MULSOW, PH.D., Assistant in Bacteriology, University of Chicago.
- BENJAMIN H. WILLIER, S.B., Assistant in Zoölogy, University of Chicago.
- MARIE AGNES HINRICHS, Assistant in Zoölogy, University of Chicago.
- BERNARD RAYMUND, S.M., Assistant in Physiology (Spring Quarter), University of Chicago.
- HERBERT ELLIS LANDES, A.B., Assistant in Physiological Chemistry, University of Chicago.
- JAY MCKINLEY GARNER, S.B., Assistant in Physiological Chemistry, University of Chicago.
- ROBERT EARL GROGAN, S.B., Assistant in Pharmacology and Physiology, University of Chicago.
- EDMUND FRANCIS FOLEY, S.B., Assistant in Pharmacology, University of Chicago.
- GEORGE ROSS ROBERTSON, S.B., S.M., Assistant in Organic Chemistry, University of Chicago.
- AUDREY CHESTER GRUBB, S.B., Assistant in Quantitative Analysis (Summer), University of Chicago.
- LILLIE EICHELBERGER, S.B., Assistant in Chemistry, University of Chicago.
- MARGUERITE WILCOX, S.B., Assistant in Chemistry, University of Chicago.
- LEO P. SHERMAN, S.B., Assistant in Chemistry (Summer), University of Chicago.
- RALPH WALDO GERARD, Assistant in Quantitative Analysis, University of Chicago.
- CLARENCE E. BROCKER, S.B., Lecture Assistant in Chemistry, University of Chicago.
- FRED MILLER DRENNAN, M.D., Assistant in Medicine, 122 South Michigan Boulevard.
- JOHN J. STOLL, M.D., Assistant in Medicine, 1103 South Ashland Boulevard.
- EVA FRAZER, M.D., Assistant in Medicine, Rush Medical College.
- YALE NORMAN LEVINSON, M.D., Assistant in Medicine, Rush Medical College.
- ISADORE RABENS, M.D., Assistant in Medicine, 3317 Lawrence Avenue.

- MAURICE JAMES SHERMAN, M.D., Assistant in Medicine, Rush Medical College.
 NORTON R. YEAGER, M.D., Assistant in Medicine, Rush Medical College.
 CHARLES KLAUS STULIK, M.D., Assistant in Medicine (Pediatrics), 1108 Winchester Avenue.
 MILDRED JESSIE ROBERTS, M.D., Assistant in Medicine (Pediatrics), Rush Medical College.
 CASSIE BELL ROSE, M.D., Assistant in Surgery (Radiology), Presbyterian Hospital.
 JOHN PAUL ASHWORTH, M.D., Assistant in Surgery (Genito-urinary), 2827 West Madison Street.
 THOMAS COTTRELL, M.D., Assistant in Surgery (Genito-urinary), 800 North Clark Street.
 WALTER THOMAS VENN, M.D., Assistant in Surgery (Genito-urinary), 25 East Washington Street.
 MABEL MARIE MATTHIES, M.D., Assistant in Obstetrics and Gynecology, 5 South Wabash Avenue.
 EDWIN M. NEHER, M.D., Assistant in Ophthalmology, 1515 West Monroe Street.
 CLARK WYLIE FINNERUD, S.B., Assistant in Dermatology, 25 East Washington Street.
 FREDERICK CHRISTOPHER, M.D., Assistant in Surgery, 122 South Michigan Boulevard.
 JANET ANDERSON, S.B., Laboratory Assistant in Pathology, University of Chicago.
 MARION G. FRANK, S.B., Lecture Assistant in Chemistry, University of Chicago.
 ———, *Dane Billings Memorial* Fellow in Medicine.
 EDWIN M. MILLER, M.D., *Nicholas Senn* Fellow in Surgery.
 GATEWOOD, M.D., *Thompson-Bevan* Fellow in Surgery.
 ———, *Francis A. Hardy* Fellow in Surgery.
 CHARLES LELAND SHAFER, M.D., Fellow in Dermatology, Hyde Memorial Fund.
 WILLIAM GEORGE HIBBS, S.B., Fellow in Pathology, Rush Medical College.

FELLOWS APPOINTED FOR 1919-20

(IN THE DEPARTMENTS OFFERING MEDICAL COURSES AT THE
 UNIVERSITY OF CHICAGO)

- HELEN JEANETTE ALLEN, A.B., Zoölogy.
 THEODORE H. BAST, A.B., Anatomy.
 NORVIL BEEMAN, A.B., Chemistry.
 HENRY LEON COX, S.B., Chemistry.
 FRANK LOUIS DE BEUKELAER, A.M., Dupont Fellow in Chemistry.
 CORNELIA MITCHELL DOWNS, A.B., Bacteriology.
 HAROLD CLIFFORD GOLDTHORPE, S.B., Physiological Chemistry.
 CHESTER AUBREY GRUBB, A.B., Hoskins Fellow in Chemistry.
 IVAN C. HALL, S.M., Logan Fellow in Bacteriology.
 MARTIN CHARLES EDWARD HANKE, S.B., Chemistry.
 ROBERT SANDERSON MULLIKEN, S.B., Loewenthal Fellow in Chemistry.

LATHROP EMERSON ROBERTS, S.B., Swift Fellow in Chemistry.
ALBERT J. SALATHE, A.B., A.M., Fellow in Chemistry.
FRANCIS HUNTINGTON SCOTT, A.B., Zoölogy.
GERTRUDE WILLIAMS, A.B., Edith Barnard Fellow in Chemistry.
ROGER JOHN WILLIAMS, S.B., Fleischman Fellow in Physiological Chemistry.

EXTRA-MURAL INSTRUCTORS

AT THE HOME FOR DESTITUTE CRIPPLED CHILDREN

WALLACE BLANCHARD, M.D., Assistant Clinical Professor of Surgery (Orthopedic).

AT CHICAGO ISOLATION HOSPITAL

HEMAN SPALDING, M.D., Associate Clinical Professor of Medicine.

AT ST. LUKE'S HOSPITAL

LEWIS L. MACARTHUR, M.D., Assistant Clinical Professor of Surgery.

AT THE CHILDREN'S MEMORIAL HOSPITAL

COLEMAN GRAVES BUFORD, M.D., Assistant Clinical Professor of Surgery.

AT THE COOK COUNTY HOSPITAL

DANIEL EISENDRATH, M.D., Clinical Professor of Surgery.

MAY MICHAEL, M.D., Assistant Professor of Medicine (Pediatrics).

HUGH MCKENNA, M.D., Assistant Professor of Surgery.

PAUL F. MORF, M.D., Assistant Professor of Surgery.

AT THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY

HENRY R. BOETTCHER, M.D., Instructor in Ophthalmology.

Thirty members of the faculty are still absent on leave in the service of the nation. It is purposed to present in detail in the next issue of the Circular of Information the name of each member of the faculty who served during the World War.

OFFICERS OF ADMINISTRATION

AT THE UNIVERSITY OF CHICAGO

HARRY PRATT JUDSON, President of the University, Harper Memorial Library, Room W11.

WALTER A. PAYNE, University Recorder and Examiner, Cobb Lecture Hall, Room 5A.

DAVID ALLAN ROBERTSON, Secretary to the President, Harper Memorial Library, Room W13.

ERNEST DEWITT BURTON, Director of the University Libraries, Harper Memorial Library, Room M27.

JOHN MILTON DODSON, Dean of Medical Students, Cobb Lecture Hall, Room 10A.

MARION TALBOT, Dean of Women, Cobb Lecture Hall, Room 14A.

AT RUSH MEDICAL COLLEGE

FRANK BILLINGS, Dean of the Faculty.
JOHN MILTON DODSON, Dean of Students.
OLIVER SAMUEL ORMSBY, Secretary of the Faculty.
WILLIAM HAMLIN WILDER, Comptroller.
JAMES H. HARPER, Registrar.
CATHARINE A. MCAULIFF, Librarian.

THE ADMINISTRATIVE BOARD OF MEDICAL AFFAIRS

AT THE UNIVERSITY OF CHICAGO

THE PRESIDENT, *Chairman*

THE RECORDER, *ex officio*.
DEAN JOHN MILTON DODSON, *ex officio*.
DEAN JAMES ROWLAND ANGELL, *ex officio*.
DEAN LEON CARROLL MARSHALL, *ex officio*.
DEAN HENRY GORDON GALE, *ex officio*.
DEAN MARION TALBOT, *ex officio*.
DEAN HORATIO HACKETT NEWMAN, *ex officio*.
PROFESSOR JOHN MERLE COULTER.
PROFESSOR ALBERT ABRAHAM MICHELSON.
PROFESSOR NATHANIEL BUTLER.
PROFESSOR FRANK BILLINGS.
PROFESSOR LUDVIG HEKTOEN.
PROFESSORIAL LECTURER WALTER STANLEY HAINES.
PROFESSORIAL LECTURER ARTHUR DEAN BEVAN.
PROFESSORIAL LECTURER JOHN CLARENCE WEBSTER.
PROFESSOR JULIUS STIEGLITZ.
PROFESSOR EDWIN OAKES JORDAN.
PROFESSOR FRANK RATTRAY LILLIE.
PROFESSOR ROBERT RUSSELL BENSLEY.
PROFESSOR CHARLES JUDSON HERRICK.
PROFESSOR ROBERT ANDREWS MILLIKAN.
PROFESSOR HARRY GIDEON WELLS.
PROFESSOR ANTON JULIUS CARLSON.
PROFESSOR BASIL COLEMAN HYATT HARVEY.
PROFESSOR PRESTON KYES.
PROFESSOR CHARLES MANNING CHILD.
ASSOCIATE PROFESSOR ELBERT CLARK.
ASSOCIATE PROFESSOR GEORGE WILLIAM BARTELMEZ.
ASSISTANT PROFESSOR DAVID JUDSON LINGLE.
ASSISTANT PROFESSOR NORMAN MACLEOD HARRIS.
ASSISTANT PROFESSOR ARNO BENEDICT LUCKHARDT.
ASSISTANT PROFESSOR FRED CONRAD KOCH.
ASSISTANT PROFESSOR JOHN FOOTE NORTON.
ASSISTANT PROFESSOR CHARLES HENRY SWIFT.

ASSISTANT PROFESSOR ARTHUR LAWRIE TATUM.

ASSISTANT PROFESSOR WILLIAM J. CROZIER.

ASSISTANT PROFESSOR FRED TERRY ROGERS.

DR. DUDLEY B. REED.

DR. GEORGE T. CALDWELL.

DR. CARL R. MOORE.

DR. ALBERT W. BELLAMY.

DR. ANDREW C. IVY.

DR. HOWARD MARTIN SHEAFF.

MR. CLARK OWEN MELICK.

MISS HARRIET FAY HOLMES.

MISS MARION HINES.

MR. RICHARD W. WATKINS.

MISS EMMA KOHMAN.

MR. EDWARD CHARLES MASON.

MR. JOHN VINCENT LAURENCE.

MR. PAUL ROBERTS CANNON.

MR. JOHN EVERETT GORDON.

INTRODUCTORY STATEMENT

FRESHMAN AND SOPHOMORE CLASSES ARE LIMITED TO 100 IN EACH CLASS; THE JUNIOR AND SENIOR CLASSES TO 120 IN EACH CLASS. NO APPLICATION WILL BE RECEIVED AFTER SEPTEMBER 1, 1919.

*Students entering with conditions in any branch are strongly advised to enter for the Summer Quarter, beginning June 16.*¹ The student must commence the medical curriculum with the Autumn or Spring Quarter in order to pursue the medical courses in proper sequence.

Changes in rules and regulations.—The right is reserved by the Faculty to make changes at any time in requirements for admission, curriculum, fees, or any rules and regulations.

The curriculum.—The curriculum of Rush Medical College, extending over five annual sessions of nine months (three quarters) each, embraces (1) two years of work in the fundamental branches of Anatomy, both gross and microscopic, Neurology, Embryology, Physiology, Physiological Chemistry, Pharmacology, Hygiene and Bacteriology, and Pathology; (2) two years in the clinical branches of Materia Medica, Therapeutics, Clinical Pathology, Medicine, Surgery, Obstetrics, and the special lines of practice; and A FIFTH INTERNE OR ADVANCED WORK YEAR.²

¹ No student is permitted to begin his medical work with conditions in any of the branches required for admission, especially Physics, Chemistry, and Biology. In these and all other departments of the University of Chicago courses are given in the Summer Quarter by which deficiencies can be made up. For students entering from other medical schools, special review courses are offered in Anatomy, Physiology, and the other fundamental medical sciences, and satisfactory work in these courses will be accepted in lieu of examination on the work of the first two years.

² Since the session of 1905-6, this fifth year has been offered as an optional year, leading to the degree of Doctor in Medicine, "Cum Laude." The increasing demands for internes has made it possible for every graduate of Rush Medical College to secure such a position in a first-class hospital.

The work of this fifth year will consist of:

A. An internship in a hospital approved by the Faculty and taken under conditions prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College, including clinical work, with the presentation of a dissertation embodying original work.

Fundamental branches at the University of Chicago.—The courses in the fundamental branches are offered only at the University of Chicago, in the spacious Hull Biological Laboratories, by instructors whose time is wholly devoted to teaching and investigation in their respective lines. It is believed that the student pursuing these studies in the atmosphere of an institution devoted to scientific work cannot but gain a broader and more thorough conception of these sciences. Such a training will not only afford a better preparation for the clinical courses of the Medical College and for the practice of medicine and surgery, but will also enable the student to follow more easily in paths along which medical advances are being made and to apply these new discoveries in his daily work.

The clinical branches are taught at Rush Medical College, with its Central Free Dispensary, the Presbyterian Hospital, the Children's Memorial Hospital, the Home for Destitute Crippled Children, the Cook County Hospital, the Durand Hospital of the John McCormick Institute for Infectious Diseases, and other hospitals in the vicinity of the College.

The requirements for admission comprise (a) the completion of a four-year high-school course, and, in addition, (b) two years of work in a recognized college or university (see pp. 27-30).

No person should enter upon the study of medicine with a preparation less thorough and comprehensive than that demanded by these minimum requirements. The medical examining boards in most of the states require this amount of premedical work as a prerequisite for licensure. *Every student should complete a four-year college course, including the physics, chemistry, and biology above mentioned, before entering the Medical School, if his age and other circumstances make it possible for him so to do.* This additional college work should secure for him a greater breadth of culture and a catholicity of interest which will make him a man of larger power, influence, and usefulness in the community.

Admission to advanced standing.—Students or graduates of other medical colleges whose work is recognized by this College may be admitted to advanced standing (see p. 32).

Requirements for graduation.—The minimum requirements for graduation comprise attendance upon four sessions of three quarters (nine months) each, the completion of a prescribed amount of work, the passing of certain examinations both written and practical, and the successful completion of the fifth year (see p. 32).

The combined course for the degrees of M.D. and S.B., A.B., or Ph.B.—Attention is called to the fact that courses are offered in the University of Chicago in the Departments of Art, Literature, and Science, in all the branches of a liberal education (see p. 30).

Higher degrees.—A Master's degree or the degree of Ph.D. may be secured by special work in the medical sciences, and additional residence, in conformity with the regulations of the University covering such degrees.

The elective system.—The work of the medical curriculum is, in part, elective, the choice of the student for each quarter being subject to certain restrictions (see pp. 42–43).

The quarter system.—The College is in session during four quarters each year, but students beginning their medical work must commence with the Autumn or Spring Quarter (see p. 39).

The tuition fee is sixty dollars per quarter, or one hundred and eighty dollars for each of the four annual sessions, this tuition including all laboratory fees (see pp. 34–39).

Student self-help.—Many opportunities are afforded in Chicago for students to earn a portion (and in exceptional cases the whole) of their expenses. A booklet giving fuller information in regard to this matter will be mailed on application.

GENERAL REGULATIONS

Students are admitted to the Medical Courses as medical students (of Rush Medical College), and also, by the same matriculation and fee, as (1) *undergraduate students* (candidates for a Bachelor's degree, S.B., A.B., or Ph.B.) or (2) *graduate students*. (*Graduates* of the University of Chicago, or of other universities or colleges of good standing, are admitted to the Medical Courses as graduate students; they are allowed all the privileges of the members of the Graduate Schools of the University.) In addition to students in regular standing, provision is made for the admission to the University of undergraduate students not seeking degrees. Such students are known as *unclassified students*. They may register for medical subjects, but they are not candidates for the M.D. degree.

1. *Admission.*—(a) Each student must present to the Faculty a certificate of good moral character, signed by at least two physicians of good standing in the state in which the applicant last resided. Space is provided for this purpose on the Application Blank. (b) He must be able to comply with the requirements for admission to the Medical Courses of the University of Chicago (see p. 27). In brief, they consist of a four-year high-school course plus two years of college work, which must have included Latin, if not taken in high school, English, Trigonometry, College Physics, Chemistry, and Zoology, and a reading knowledge of French or German. (c) He will matriculate and register as a student of Rush Medical College as well as of the University at the beginning of his medical course. Such matriculation and registration are accomplished at the University without extra fee.

2. *Medical Courses as undergraduate work in the course for a Bachelor's degree.*—(a) The first two years' work in Medicine may be taken as the third and fourth years of the Bachelor of Science course, or, in very large part, of the course for the degree of A.B. or Ph.B. (For requirements see p. 30.) Students who wish to enter college and prepare to take the medical work as part of their Baccalaureate course may enter at the beginning of the Junior College course (first college year or at any further stage of advancement).¹ (b) Each student must comply with 1(a). (c) In order to comply with the rules of the medical examining boards of several states, a student will matriculate with the Dean of Rush

¹ A student desiring to enter the course as a candidate for the S.B., A.B., or Ph.B. degree is requested to enter into correspondence upon the subject with the University Examiner of the University of Chicago, Chicago, Ill.

Medical College (at the University) at the beginning of his work in Medicine. He will consult with the Dean of Medical Students each quarter in regard to his work, and take a card of advice to the Dean of the Senior Colleges, with whom the student will continue to register until he receives a Bachelor's degree. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.*

3. *Admission as a graduate student.*—(a) Admission to the Graduate Schools of the University is granted (1) to those who have been graduated from the Colleges of the University of Chicago with the degree A.B., Ph.B., or S.B.; (2) to those holding Baccalaureate degrees from other institutions of good standing. (b) Such students should present their diplomas or other evidence of graduation from a standard college at the office of the Dean of the Graduate Schools. Inquiry regarding eligibility for admission to the Graduate Schools (stating degree and date, and institution conferring it) should be made of the University Examiner in advance. (c) A graduate student taking the Medical Courses must comply with 1 (a) and (c). He will consult each quarter with the Dean of Medical Students, and will take a card of advice from him to the Dean of the Graduate School, with whom the student will register. *Credit will not be given toward the M.D. degree unless the student complies with this regulation.* (d) Advanced standing in the Medical Courses is granted for work done in other medical schools according to the conditions stated on p. 32 of this *Circular*.

4. *Unclassified students.*—Persons at least twenty-one (21) years of age not seeking a degree may be admitted, through the office of the University Examiner, to the courses of instruction offered in the University, as unclassified students, on the following conditions:

1. They shall present (a) credentials showing the completion of work equivalent to the admission requirements of the Colleges, or (b) evidence of successful experience as a teacher or other valuable educative experience in practical life.

2. Each applicant shall present by certificate or examination evidence of training in English at least equivalent to the entrance requirements of the Colleges in that subject. This requirement may be waived in the case of foreign students of ability who have a sufficient knowledge of the English language to profit by the instruction offered.

3. They shall give satisfactory reason for not classifying and becoming candidates for degrees.

4. They enter the University for the purpose of making a study of a definite subject or group of subjects for which adequate preparation has been received. In case of doubt as to the applicant's ability to pursue successfully the work desired, the approval of the instructor to whose courses admission is sought, or of an official representative of the department concerned, will be required.

5. They may not register for elementary courses only, i.e., courses intended for first-year college students.

6. They are subject to the general regulations pertaining to other undergraduates, including attendance at Chapel Assembly and work in Physical Culture.

7. They are ineligible for public appearance.

NOTE.—Students entering the University for the first time should make it a point to complete all arrangements for entrance, either by correspondence or in person, at least two weeks before the opening of the quarter.

THE CURRICULUM

1. *The fundamental medical branches.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences. It includes the following courses:

- a) *Chemistry*, The Chemistry of Medicinal Drugs, $\frac{1}{2}$ major (85).¹
- b) *Anatomy*, $6\frac{1}{2}$ majors as follows: Human Anatomy (Dissecting), $3\frac{1}{2}$ majors (1, 2, 3, 4); Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20 or 21); Neurology, 1 major (Anatomy 17).
- c) *Physiology*
- d) *Physiological Chemistry and Pharmacology* } 6 majors as follows: Physiology, 3 majors (12, 13, 14);
Physiological Chemistry, 2 majors (19 and 20); Pharmacology, 1 major (21).
- e) *Pathology*, 2 majors as follows: Pathology (1, 2).
- f) *Hygiene and Bacteriology*, $1\frac{1}{2}$ majors as follows: Bacteriology (2B).
- g) 2 additional majors in any department or departments of the student's choice, approved by the Faculty.

A total of 18 majors.² All this work is given at the University of Chicago.

2. *The clinical medical branches.*—The work of the two clinical years comprises the following branches: (a) *Materia Medica*, Therapeutics, Medical Jurisprudence, and Preventive Medicine, at least 2 majors; (b) *Pathology*, at least 1 major; (c) *Medicine*, at least $5\frac{1}{2}$ majors; (d) *Surgery*, at least $5\frac{1}{2}$ majors; (e) *Obstetrics and Gynecology*, at least 3 majors; (f) *Laryngology and Otology*, at least 1.2 majors; (g) *Ophthalmology*, at least .8 major; (h) *Skin and Venereal Diseases*, at least 1 major; (i) additional work in any branch, or branches, of the student's choice, at least 2 majors; a total of 22 majors.

REQUIREMENTS FOR ADMISSION TO THE MEDICAL COLLEGE

These comprise as a minimum (a) the successful completion of a four-year high-school or academy course, qualifying the student to enter the Junior College (Freshman class) of the University of Chicago, and (b) 18 majors (=6 quarters) of the usual college course, or a full equivalent therefor.

A. HIGH-SCHOOL WORK REQUIRED FOR ADMISSION TO THE JUNIOR COLLEGE (FRESHMAN CLASS), UNIVERSITY OF CHICAGO³

A student must offer for admission 15 units⁴ of credit by examination or by certificate from an approved school from which he has graduated with an average grade higher than the pass mark of the school by at least 25 per cent of the difference between that mark and 100. Among these must be (a) 3 units of English, (b) a "principal group" of 3 or more units, and (c) a "secondary group" of 2 or more units. Of the 15 units 7 must be selected from the subjects named

¹ The numbers in parentheses refer to the course numbers in the corresponding department.

² For definition of major see p. 40.

³ A complete and more detailed statement of the requirements and the ground covered by each subject will be sent to any principal, teacher, or student on application to the Dean of Medical Students.

⁴ A unit corresponds to a daily recitation of 45 minutes throughout the school year of thirty-six weeks.

in the groups designated below; 5 may be selected from any subjects for which credit toward graduation is given by the approved school from which the student receives his diploma.

The principal and secondary groups offered may be selected from the following: (1) Greek, (2) Latin, (3) Modern language other than English, (4) History, Civics, and Economics, (5) Mathematics, (6) Physics, Chemistry, Botany, Zoölogy, General Biology, General Science, Commercial Geography, Physiology, Physiography, Geology, Astronomy. To form a language group the units must be all in one language. In other groups any combination of subjects may be made. Credit is not given for less than 1 unit each in Algebra, Plane Geometry, Physics, Chemistry, or a language. In Latin 2 units must be offered if the subject is to be continued in college. Less than $\frac{1}{2}$ unit in any subject is not accepted.

SUMMARY OF ADMISSION REQUIREMENTS

3 units of English.

3 (or more) units in a single group, 1-6.

2 (or more) units in another single group, 1-6.

2 (or less) units in subjects selected from any of the groups 1-6.

[Total 10 units in English and groups 1-6.]

5 units selected from any subjects accepted by an approved school for its diploma.

Entrance with conditions is not permitted.

Students intending to study medicine are strongly advised to take in the high school 2 units of Latin (Elementary Grammar and Caesar), 3 units of German or French, 1 unit each of Chemistry and Physics—with laboratory work. If these branches have not been taken in the high school, they must be taken as part of the college work required for admission (see section B, pp. 31-32). One-half unit of Trigonometry is strongly advised. A diploma is not accepted as sufficient evidence of such preparation, but specific statement is required as to the amount and character of the work in each branch of study. Blanks are furnished by the University for the presentation of such credits, and will be mailed on application to the University Examiner.

TIME OF PREPARATION—ADMISSION UNITS

Preparation for admission to a Junior College is expected to cover a period of four years in a secondary school (high school or academy) of high grade. Admission credits are reckoned in units. A unit is a course of study comprising not less than 120 clock hours of prepared work. Two hours of laboratory work are regarded as the equivalent of one hour of prepared work.

METHODS OF ADMISSION

Admission to the Junior Colleges of the University may be obtained by one of the following methods: by certificate, by examination, or by a combination of the two methods.

1. *Admission by certificate.*—Students who present credentials showing graduation from any of the following schools and whose course of study covers the entrance requirements indicated above will, upon the recommendation of their respective principals, be admitted without examination: (1) the accredited¹

¹ The continuation of any school on the accredited list of the University will depend upon the records made in the University by its graduates admitted on certificate.

schools of the University including (a) schools accredited by the North Central Association of Secondary Schools and Colleges; (b) schools approved by the Board of Admissions after inspection by official representatives of the University; (2) schools accredited by the New England College Entrance Certificate Board; (3) schools outside the territory of the associations above mentioned but accredited by a leading state university whose standards of admission are substantially the same as those of the University of Chicago. The University reserves the right to refuse admission to any student whose preparatory work was of such grade as to create serious doubt of his ability to pursue college work successfully.

2. *Admission by examination.*—Regular entrance examinations are held twice each year, in June and in September, the June examinations being those of the College Entrance Examination Board. The candidate may, at his option, take his examinations at different times, provided that no examination is valid after three years from the date when taken and that no student shall be admitted to examination at more than three regular periods. Students who present by certificate less than 15 units from an accredited school may complete the requirements for admission by examination.

a) *The June examinations.*—The examinations held by the College Entrance Examination Board in June of each year will be accepted as a satisfactory substitute for the admission examinations held by the University of Chicago. The board's examination this year will be held during the week June 16-21 and the corresponding week of the following year.

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N.Y., and must be made upon a blank form to be obtained from the secretary of the board upon application.

b) *The September examinations.*—The September examinations are held at the University. Those for 1919 will be held September 8-13. Applications for admission to these examinations should be made to the University Examiner at least thirty days in advance. Each applicant will pay in advance an examination fee of \$5.00. The University Cashier's receipt for this fee entitles the student to admission to examination in as many subjects as he wishes to take at one time.

c) *Special examinations.*—Students seeking admission at the beginning of the Winter or Spring Quarter may, upon application to the University Examiner at least thirty days in advance, arrange for special examination in subjects in which they are deficient. For admission to such special examination a fee of \$5.00 is charged.

B. COLLEGE WORK REQUIRED FOR ADMISSION TO THE MEDICAL COURSES

Eighteen majors (two years) of college work must have been taken, and this work must have included the following branches:

(1) Chemistry—(a) 3 majors of Inorganic Chemistry (or 2 majors if 1 unit of high-school Chemistry with laboratory work has been taken); (b) 1 major of Organic Chemistry; (c) 1 major of Qualitative Analysis. This work in Chemistry corresponds to the courses Chemistry 1, 2, 3, 4, and 6 (see pp. 59-60). The student is advised to take Quantitative Analysis, but this is not required.

(2) Physics—4 or 5 majors of Physics (or 2 or 3 majors if 1 unit of high-school Physics has been taken). This work in Physics corresponds to the courses Physics 1, 2, 3, 4, and 5, or 1, 2, 3S, and 4S, with Trigonometry (see p. 56).

(3) 2 majors of General Biology (Zoölogy 1 and Zoölogy 17) (see p. 48).

(4) A reading knowledge of German or of French (ordinarily 2 units of high-school or 4 majors of college work). This knowledge is determined by an efficiency test given, for 1919-20, about November 25.

(5) 3 majors of Latin (Caesar and Elementary Grammar) unless 2 units have been completed in high school.

(6) English—2 majors of college composition. This work corresponds to courses 1 and 3 in the English Department, University of Chicago, which are strictly courses in writing. English 1, for first-year students, requires at least twenty-four papers of over five hundred words each, class themes, and a lengthy term paper based on library work. English 3, offered in any quarter after the third in residence, is devoted largely to argumentative and expository writing, with a somewhat larger quantitative requirement than English 1. Both are required of all candidates for a Bachelor's degree. Students bringing from another standard institution a credit of six or more semester hours for work in composition somewhat different from that outlined above may be exempted by the Departmental Examiner in English from further training in composition.

Every student who is considering the question of entering upon the study of medicine is requested to write to the Dean of Medical Students for a blank application for admission, to fill out the same carefully, giving full details of his high-school and college work, and to mail the application, thus completed, to the Dean. He will be informed as promptly as possible as to just what credit he can be given, and in what, if any, branches he is deficient. This will make it unnecessary for the student to estimate closely his own credits, and will secure for him a prompt and definite reply to his inquiry concerning his preparation for the study of medicine.

C. REQUIREMENTS FOR THE COMBINED COURSE FOR THE DEGREES OF S.B. AND M.D.

The college preparation for the Medical Courses may be accomplished at the University of Chicago in six quarters. A student is not admitted to the Medical Courses with conditions, unless he has an equivalent amount of advanced standing in the medical curriculum (e.g., histology or embryology). *In this case these conditions must have been removed before he can enter upon the work of the second year of the Medical Courses.*

Attention is called to the fact that any credits which may be required in addition to high-school work may be secured in the Colleges of Arts, Literature, and Science of the University of Chicago by attendance during extra quarters before entering the Medical Courses. Students deficient in premedical work are urgently advised to enter the University for the Spring or Summer Quarter, in order to make up deficiencies. Credit will be accepted for such work done in any other college or university of equal standing.

Students seeking a Bachelor's degree (A.B., Ph.B., or S.B.) from the University of Chicago, in connection with the degree of M.D. from Rush Medical College, must comply with the established regulations of the University prescribed for the courses leading to such degrees. As the fundamental branches of the medical curriculum are taught in the University, the student may combine the course for a Bachelor's degree with that for the Medical degree, electing as

science courses those offered in the Departments of Anatomy, Physiology, etc., which are also courses in the medical curriculum. The prescribed work for these degrees is indicated on p. 32.

While it is thus possible for one to secure a Bachelor's degree and the degree of M.D. in from six to six and one-half years, every student should secure a more thorough and comprehensive collegiate preparation if it is possible for him so to do. For students taking this broader course the following subjects are recommended as of especial value in preparation for medical study: Greek, 3 majors; Calculus, 1 major; Elementary Botany, 1 major; General Morphology of Thallophytes, 1 major; Zoölogy, 3 majors; Introductory Physiology, 1 major; Physical Chemistry, 1 major; Quantitative Chemical Analysis, 1 major; Physiography, 1 major; Psychology, 2 to 4 majors.

TOTAL REQUIREMENTS FOR THE BACCALAUREATE DEGREES

COLLEGE COURSES

College courses, with few exceptions, are given as "majors," one exercise daily throughout a quarter. Three majors and the required work in Physical Culture constitute full work for a quarter. In comparison with admission credits two majors are reckoned as equal to one unit.

REQUIREMENTS FOR THE ASSOCIATE'S TITLE

During his first two years the student is required to take:

1. Two majors of English (courses 1 and 3). English 1 must be taken in the first quarter of residence.

2. A "continuation group" of three consecutive majors, taken during the first year, which continues the work of either his principal or secondary admission group or of a subject in which he took one unit in the Senior year of high school. Careful consideration should be given to the choice of these courses.

3. Enough majors in each of the following "distribution groups" to make his total (high-school+college) credit in each group 4 majors (=2 units).

I. Philosophy, History, and Social Science: Departments of Philosophy, Psychology, Education, Political Economy, Political Science, History, History of Art, and Sociology and Anthropology.

II. Foreign Language (all 4 majors in one language): Departments of Greek Language and Literature, Latin Language and Literature, Romance Languages and Literatures, Germanic Languages and Literatures.

III. Mathematics: Department of Mathematics.

IV. Science: Departments of Astronomy and Astrophysics, Physics, Chemistry, Geology and Paleontology, Geography, Zoölogy, Anatomy, Physiology, Botany, Pathology, and Hygiene and Bacteriology.

The title of Associate is conferred upon the completion of 18 majors, with at least 32 grade-points, including the fulfilment of the specified requirements as listed above.

REQUIREMENTS FOR A BACHELOR'S DEGREE

The Bachelor's degree is conferred when the student has completed 36 majors and obtained at least 72 grade-points.¹ These 36 majors shall include

¹ The marking system is fully explained in the *Course Book*, which is issued to each student.

one principal sequence of at least 9 coherent and progressive majors taken in one department or in a group of departments and one secondary sequence of at least 6 majors selected from a different department or group of departments. These sequences must have the approval of the Dean. The courses in medicine may be counted in satisfaction of the principal sequence and the premedical courses may be counted in satisfaction of the secondary sequence.

The degree of A.B. is conferred when the principal sequence consists of 11 majors of Latin and 9 majors of Greek (7 if all are taken in the University), including entrance work. A secondary sequence of 6 majors is also required.

The degree of Ph.B. is conferred when the principal sequence has been taken in the Departments of Philosophy, Social Sciences, Language, or Literature.

The degree of S.B. is conferred when the principal sequence has been taken in the Departments of Mathematics or Science.

Mathematics may at the option of the student be used as the principal department for the degree of either Ph.B. or S.B.

ADMISSION TO ADVANCED STANDING IN THE MEDICAL COURSES

Students are admitted to advanced standing in Rush Medical College as follows:

Students from other medical schools whose standards are fully equivalent to those of this institution may receive credit for time spent—estimated in months—and for work successfully completed in such institutions, provided it is equivalent to corresponding work in the courses in Rush Medical College. Such a student should give an explicit statement in regard to his preliminary education, in high school or academy and in college, before beginning the study of medicine, the date of beginning and ending of each session attended in a medical college, together with the name of the college and a statement of the studies which he has successfully completed, this latter statement setting forth the exact number of hours given to each subject. The credit claimed in each branch must be passed upon by the Dean of Medical Students. Attention is called to the fact that a limit is set to the number of students admitted to each class.

Application blanks.—Blanks for presenting these credits will be furnished on application to the Dean of Medical Students. A student may matriculate at any time in person or by correspondence.

REQUIREMENTS FOR GRADUATION

The following are the requirements for the degree of Doctor of Medicine:

The candidate must be not less than twenty-one years of age and must have studied medicine the legal period. He must have paid all dues, must have complied with all the requirements, and must have maintained unexceptionable conduct while at the College.

He must have attended twelve full quarters, or an equivalent amount of time, in a recognized medical school, of which at least the last three quarters must have been taken in this institution, and fifty-two months must have elapsed between the beginning of his first session in a medical school and the date of his graduation.

He must have completed successfully all of the work required, as follows: 18 majors of work in the Freshman and Sophomore years, comprising a minimum

of 6½ majors in Anatomy (from courses offered in the Department of Anatomy and the subdepartment of Embryology; these courses include both Gross and Microscopic Anatomy¹); 6 majors in Physiology (from courses offered in the Departments of Physiology and of Physiological Chemistry and Pharmacology); 2 majors in the Department of Pathology; 1½ majors in the Department of Bacteriology; 2 majors in one or more of the departments of his choice.²

His work for the first two years must be pronounced satisfactory by the Committee on Promotions, when a certificate for the completion of the first 18 majors of medical work will be issued to him.

Twenty-two majors of work in the Junior and Senior years, comprising a minimum of 2 majors in Pharmacy, Materia Medica, Therapeutics, and Preventive Medicine; 1 major in Pathology; 5½ majors in Medicine; 5½ majors in Surgery; 3 majors in Obstetrics and Gynecology,³ at least 2 majors of which must be in Obstetrics; 1.2 majors in Laryngology and Otology; .8 major in Ophthalmology; 1 major in Skin and Venereal Diseases, 2 additional majors in any branch or branches of his choice. These requirements are presented in detail in the departmental statements, pp. 68-84.

He must have passed, successfully, a final examination, both written and practical, in Materia Medica and Therapeutics; Pathology; Medicine; Surgery; Obstetrics and Gynecology; Laryngology and Otology; Ophthalmology; Skin and Venereal Diseases.

On the successful completion of four years of work, and of the final examinations, a four-year certificate is issued which qualifies the student to serve as an interne in a hospital.

He must serve a year of successful internship in an approved hospital, or in advanced work, including clinical training, in one of the departments of the College.

He must attend the graduating exercises and receive his diploma in person, unless excused for cause by special action of the Faculty.

GENERAL INFORMATION FOR STUDENTS ENTERING THE FRESHMAN AND SOPHOMORE CLASSES

ROUTINE OF ENTRANCE

I. CREDENTIALS

Applications should be addressed to The University of Chicago, or to Rush Medical College, Chicago, Ill. When presenting himself for admission to the University, the student should bring his *admission credits*, if he is entering a Junior College at its beginning; his *letter of dismissal* and an official statement concerning his previous work, if he is entering with advanced standing from another institution; and a *diploma*, if he is applying for admission to a Graduate School.

These documents should be presented at the office of the Dean of Medical Students, Cobb Lecture Hall. Detailed directions will be furnished in the Dean's office as to the mode of matriculating and registering for courses of instruction desired.

¹ They must include the dissection of the lateral half of the human body.

² As to the conditions governing such choice see p. 42, paragraph 4.

³ Each student must have personally attended not less than twelve patients in confinement.

II. MATRICULATION AND REGISTRATION

1. *Time of registration.*—(a) Students in residence will register on the days announced on the bulletin boards and in the *Weekly Calendar*. (b) Students entering the University for the first time, or resuming work after absence for a quarter, will register on the first day of the quarter.

2. *Order of procedure for new students.*—New undergraduate students will: (a) In case they come from a secondary school or another college present credentials to the University Examiner and secure a certificate of admission and a *Course Book*. This should be done by correspondence. New students are urged to send their credentials to the Examiner at least two weeks before they come to register. (b) Matriculate in the office of the Dean of the School or College to which admission is desired. Matriculation is granted on presentation of the proper credentials which entitle the student to enter the University. As evidence of admission the student is given a *matriculation card*. This card should be retained under all circumstances, as it must be shown whenever membership in the University is to be demonstrated. (c) Register in the same office for the courses of study desired for the ensuing quarter. For this purpose the student will be given a *registration card* for the quarter, on which, after consultation with the Dean, the courses desired will be entered. (d) Pay the University fees for the ensuing quarter. In order to do this, the student will present the matriculation card and the proper registration card at the office of the Cashier, Press Building, Room 1. On payment of fees the Cashier will stamp the matriculation card and return it to the student, together with a receipt for tuition fees and for laboratory fees (if any).

Tuition and other fees may conveniently be paid by check to the order of the University of Chicago. Details as to fees will be found below.

The names of the students will be sent to instructors as entitled to attend classes *only after the fees have been paid*, as above specified.

Graduate students follow the procedure above but report to the Dean of the Ogden Graduate School of Science instead of to the University Examiner.

FEES FOR MATRICULATION, TUITION, DEPOSITS, AND APPARATUS

1. *Matriculation fee.*—(a) The matriculation fee is \$5.00, and is required of every student on entrance to the University. It is payable but once. (b) A medical student will also matriculate as a student of Rush Medical College. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years. (c) An undergraduate student, candidate for a Bachelor's degree, who wishes to take the Medical Course as a part of the work for the Bachelor's degree will matriculate also as a student of Rush Medical College at the beginning of the first year of his work in the Medical Course. No extra fee is charged, and the matriculation is good for the complete Medical Course, including the clinical years.

NOTE.—Matriculation for Rush Medical College can be accomplished at the University through the Dean of Medical Students.

2. *Tuition fee.*—(a) The tuition fee for the Medical Courses (3 to 3½ majors each quarter) is \$60.00 per quarter, including all laboratory fees.

Under the medical-practice acts and the rules of the medical examining boards of most of the states of this country, an applicant for a license to practice

must have attended at least four annual sessions in a recognized medical school. Therefore a student taking the Medical Courses with a view to procuring the degree of M.D. must matriculate *as a medical student* at least forty-five months before the date of his expected graduation in medicine. From the date of such matriculation he is required to pay the tuition fee for the Medical Courses, whether he is registered as a Senior College student, a graduate student, or otherwise.

In order that a graduate student, Senior or Junior College student, may have his work counted toward the M.D. degree, he must be matriculated as a student of Rush Medical College and must each quarter secure from the Dean of Medical Students a card of advice as to registration, and must present this card to his own Dean on registering with him.

NOTE.—A student who is taking the Medical Courses with no intention of securing the medical degree may, if he prefers, pay the usual University fee of \$50.00 per quarter, with additional laboratory fees as follows:

In Chemistry and all Biological Laboratory courses, \$5.00 for a major course and \$2.50 for a minor course.

Students taking courses prerequisite for admission to the Medical Courses should consult the *Circular of Information* for the Biological Departments.

(b) Students taking two majors or less will pay \$20.00 per major. (c) All tuition and laboratory fees are due and payable on or before the *first* day of *each* quarter. All fees are payable to the Cashier, Press Building, Room 1.

Registration is not complete until all University bills are paid. Those who fail to meet this obligation within the first five days of the quarter are not regarded as members of the University. After the fifth day, to secure membership in the University, the consent of the Dean and the payment of a fee of \$5.00 for late registration will be required.

3. *Laboratory apparatus and supplies.*—(a) A compound microscope is required for most of the Medical Courses. Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation. Students not possessing a microscope may rent one from the Laboratory Supply Department at a cost of \$1.50 per quarter for a compound microscope and \$1.00 additional for an immersion lens. (b) All students taking courses in the Department of Physical Culture are required to provide themselves with a gymnasium suit for use in the gymnasium. The cost of such a suit is about \$4.00. (c) Every student taking a course in the Department of Chemistry is required to obtain and deposit with the Curator a \$5.00 coupon ticket to be used in the purchase of necessary apparatus and materials for the laboratory work. A new coupon ticket must be deposited on request of the Curator when materials used and breakage make the replenishment of the deposit necessary, balance of \$2.50 being required at all times. No charges are made against these tickets without the knowledge of the student, and the unexpended balance is refunded to the student when he leaves the Department. (d) A student taking a course in any of the biological departments is required to obtain a \$5.00 coupon ticket for the purchase of apparatus used and materials required in the course. When more than one biological course is taken, a coupon ticket for \$10.00 must be purchased by the student. Such coupon ticket must be surrendered and refund of balance due claimed at the end of each quarter, and new coupon ticket be purchased for the succeeding quarter. If, during the quarter, the balance for a single course is

reduced to \$1.00 or, for more than one course, to \$2.00, further deposit of a \$5.00 coupon ticket will be demanded by the Laboratory Supply Department. The balance mentioned is intended to serve as a deposit against avoidable loss, breakage, or damage in the laboratories. Each student will be charged for damage or loss for which he is individually responsible and for his pro rata share of damage or loss the responsibility for which cannot be individually located. The unexpended balance of each biological coupon ticket is refunded to the student shortly after the end of the quarter. (e) In addition to the above-mentioned tickets, students registered for courses in Physiology and Physiological Chemistry are required to provide themselves with special supply and breakage tickets, a \$5.00 ticket for each course. (f) A student may procure a skeleton from the Osteological Laboratory on payment of a deposit of \$12.00 for the same, or part of a skeleton on payment of a deposit of \$6.00. The deposit will be refunded when the skeleton (or part) is returned uninjured. The necessary textbooks may be purchased at the University of Chicago Bookstore in Ellis Hall.

ROOMS, BOARD, AND GENERAL EXPENSES

There are at the University twelve residence halls for students, of which seven are for women, and of the five halls for men two are reserved for students of the Divinity School. The cost of these rooms is from \$25 to \$75 for the entire quarter. This includes heat, light, and care, except that in Drexel House the rooms are cared for by the students themselves. The rooms in the Halls are for the most part single and are intended for occupancy by one student. A few rooms in each Hall may be occupied by two students. Diagrams of the Halls showing prices of rooms will be sent by the Cashier on application. The rooms are furnished with study-table, chairs, bookcase, bureau, mirror, chamber-ware, rug, bedstead, and mattress and bedding, with the exception that in Hitchcock Hall rugs are furnished by the students, and in Drexel House bedding is furnished by the students. Towels must be furnished by the students. Rooms may not be subrented, nor can exchange or transfer of rooms be made except by permission of the Cashier.

All applications for rooms, or for information concerning rooms and board, within the quadrangles should be made to the Cashier.

The table shown below will furnish an estimate of the annual expenses, exclusive of tuition and laboratory fees, for thirty-six weeks, of a student in the University residing within the quadrangles.

	Lowest	Average	Liberal
Rent and care of room.....	\$ 75.00	\$105.00	\$225.00
Board.....	162.00	198.00	240.00
Laundry.....	18.00	30.00	45.00
Textbooks and stationery.....	10.00	20.00	50.00
Total.....	\$265.00	\$353.00	\$560.00

An opportunity to share in co-operative housekeeping and thereby to reduce living expenses somewhat is offered at Drexel House, which accommodates sixteen women who share in the preparation of meals and the care of the house. The cost of room rent for each student is \$25.00 for the quarter, and

the co-operative plan makes the cost of table board considerably less than is possible under other circumstances. Some experience in housekeeping and adaptability to group life are necessary. Correspondence with reference to rooms in Drexel House should be addressed to the Director of the Housing Bureau.

The University, through the Housing Bureau, renders personal assistance to students who have not secured rooms in the residence Halls. Upon arrival at the University, students should apply at once to the Housing Bureau, located in Room 1, Press Building, for a list of inspected and approved rooms and boarding-houses. Rooms which fail to meet certain standards of ventilation and cleanliness are not placed on the approved list of the Housing Bureau. Students who secure their rooms through the Housing Bureau may be assured that the rooms they engage will be in houses renting exclusively to men or exclusively to women, and that in the women's houses the use of a reception room will be provided at least two evenings a week. These standards are not maintained in other rooming houses, and incoming students are especially cautioned against strangers who approach them at the depot or on the streets and offer their services in securing rooms.

Renting rooms, not in University Halls, by mail is not satisfactory. There are always more rooms on the list than will be occupied, and consequently there is always a choice.

Most students off the quadrangles secure furnished rooms, which may be had at prices ranging from \$30 to \$60 a quarter, and take their meals at the University or at restaurants in the neighborhood. It is difficult to find good board by the week or month, and there are very few places where board and room are offered. As a result, it is customary to pay for each meal separately. Cafeteria service is provided at the University Commons—Ida Noyes Hall for women and Hutchinson Hall for men. Men occasionally find a small room, or a dark room, for less than \$30 a quarter, but women usually have to pay \$36 or more. Householders usually prefer men, hence the price level is higher for women. Not less than \$5.50 a week should be allowed for table board. One can seldom find a room with outside light, droplight, a study table, ample closet space, and a comfortable bed for less than \$36 a quarter.

Desirable furnished rooms for light housekeeping are difficult to find. They range in price from \$20 to \$40 a month. The so-called kitchenettes in the vicinity of the University are small, usually dark, rooms with a kitchen table and gas plate, but never with running water. Rooms with kitchen privileges are to be had at the regular room rates with an additional charge of about \$6 per quarter.

Furnished rooms or apartments of from four to ten rooms vary in price from \$30 to \$150 per month.

GENERAL INFORMATION FOR STUDENTS ENTERING THE JUNIOR AND SENIOR CLASSES AT RUSH MEDICAL COLLEGE

Attendance.—In order to be credited properly with attendance on any given term or course, it is imperative that students be present at the opening of each quarter. *After the second day of any quarter no student can register except by special consent of the Dean and the payment of \$5.00 late registration fee.* At least

80 per cent of any quarter or of the scheduled hours in any course for which a student is registered must be attended in order to receive credit for the course.

Matriculation.—Each student matriculates on entering the College for the first time, but not for subsequent quarters. Matriculation may be accomplished by mail.

Registration.—Each student registers before or at the beginning of each quarter by paying the tuition fee for the quarter and filing a registration card.

In case of early registration this card is retained at the Registrar's office and *must be reclaimed by the student in person on the first or second day of the quarter. If not reclaimed at that time, the student's registration for the quarter will be canceled, and can only be restored by the consent of the Dean and the payment of \$5.00 late registration fee.*

A student, upon entering the College, at the beginning of his first quarter will procure from the Registrar a blank application for admission, fill out the same carefully, and return it to the Registrar, with the matriculation fee, for which he will receive a receipt.

The student will then present himself to the Dean of Students and exhibit to him the credentials for admission to advanced standing (see requirements for admission to advanced standing, p. 32).

The Dean will issue a card certifying admission to the proper class and will advise respecting the courses of study to be taken.

College fees.—(1) Matriculation fee, \$5.00, payable but once. (2) Tuition for each quarter, \$60.00. (3) A compound microscope is required for some of the clinical courses. Every student is strongly advised to purchase a good microscope, with an immersion lens, in order that he may become familiar with the same instrument which he will use after his graduation. Students not possessing a microscope may rent one from the College at a cost of \$1.50 per quarter for a compound microscope and \$1.00 additional for an immersion lens. Each student is required to secure, for use in the clinical laboratories, a hemacytometer (cost, about \$12.00) and a hemoglobinometer or a Talquist scale. (4) A fee of \$15.00 is paid for the out-patient obstetrical work. (5) No student can be assigned to any college work until his fees are paid. (6) The annual ticket for the County Hospital is \$5.00, which is procured from the Warden at the Hospital.

Deposits.—A deposit of \$5.00 is required from each student to cover the cost of unnecessary damage in the College buildings and of avoidable loss and breakage in the laboratories. Deductions will be made from this deposit to cover the cost of articles not returned or of damage to College property. Each student will be charged for damage or loss for which he is individually responsible and for his pro rata share of damage or loss, the responsibility for which cannot be individually located. The deposit must be made on entering the College.

PHYSICIAN'S FEE

Graduates of this College are admitted to all lectures upon the payment of the annual fee of \$5.00. Graduates of other colleges, attending the full course, will pay the fees of undergraduate students, or a physician may pay \$20.00 per month, which entitles him to attend undergraduate courses offered for that period.

The number of persons who may register for some courses is limited. No student or practitioner is admitted to such course beyond the limit specified.

Graduates of this or other colleges who are visiting the city for a brief time are cordially welcomed, but are required to procure complimentary tickets at the office.

No one is authorized to make any modification of the terms regarding fees. On financial matters the Registrar, who represents the Controller at the College office, should be consulted.

The right is reserved to make changes in the fees, curriculum, or in any other matter at any time.

Schedule of lecture hours.—Schedules are issued from the College office giving the time of each exercise.

Board and lodging.—Rooms may be obtained in the vicinity of the College at from \$3.00 to \$5.00 per week. Day board may be had at from \$6.00 to \$8.00 per week. Board and room together may be obtained at from \$8.00 to \$11.00 per week. A Bureau of Information is maintained at the College by the Y.M.C.A., to which students may apply for directions as to desirable board and lodging.

Books and instruments.—The average annual cost of the required books and instruments varies from \$35.00 to \$60.00.

The following table will furnish an estimate of the expenses of a student for each year at Rush Medical College:

	Lowest	Average	Liberal
Tuition for each year.....	\$180.00	\$180.00	\$180.00
Board and room.....	260.00	320.00	400.00
Laundry.....	30.00	38.00	52.00
Books and instruments.....	35.00	50.00	60.00
Incidental expenses.....	50.00	80.00	110.00
Total.....	\$555.00	\$668.00	\$802.00

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

A branch of the Young Men's Christian Association is in active operation at Rush Medical College, and the headquarters of the West Side Association are situated within a short distance of the College buildings. Membership in the Association, with the privilege of gymnasium, bathrooms, lecture courses, etc., may be obtained through the Rush Medical branch at reduced prices. Further information in regard to the Association may be obtained by application to the Rush Medical branch of the Association.

THE QUARTER SYSTEM

The academic year is divided into four quarters. The Summer Quarter is divided into two terms. The year begins with the first day of the Summer Quarter.

The Autumn Quarter begins on October 1, except when this day falls on Sunday, when it begins on October 2; and it ends December 23, except that

when this day falls on Saturday or Sunday it ends the preceding Friday (for the clinical courses, Saturday); and when December 23 falls on Monday it ends the preceding Saturday.

The Winter Quarter begins January 2, except when this day falls on Saturday or Sunday, when it begins the Monday following; and it ends on the Friday falling between March 18 and March 24 inclusive (for the clinical courses, Saturday).

The Spring Quarter begins on the Monday falling between March 28 and April 3 inclusive, and ends on the Friday falling between June 12 and 18 inclusive (for the clinical courses, Saturday).

The Summer Quarter begins on the Monday falling between June 15 and 21 inclusive, and ends on the Friday falling between August 28 and September 3 inclusive (for the clinical courses, Saturday).

Official University Holidays are observed on Lincoln's Birthday, Washington's Birthday, Memorial Day, Independence Day, and Thanksgiving Day. When one of these days falls on Sunday, the following Monday shall be observed as a holiday only in the case of Memorial Day and Independence Day.

THE MEDICAL CURRICULUM AS RELATED TO THE QUARTER SYSTEM

The general course of instruction in Rush Medical College requires four years of study in residence, with a minimum of attendance upon three quarters of each year. These years are designated as the Freshman, Sophomore, Junior, and Senior years, respectively.

A student may begin his college work on the first day of any quarter (see, however, p. 42, § 5), and may continue in residence for as many successive quarters as he desires, and will receive credit for work accomplished. Attendance during all the four quarters of the year is optional, but will not secure a time credit of more than one year in a medical school. At least fifty months must elapse between the date of the first matriculation and the date of graduation. Under the restriction imposed this system does not conflict with the existing medical-practice acts, nor with the rulings of the various state boards of medical examiners.

THE SUMMER QUARTER

Attention is directed to the special opportunities afforded for medical study in the Summer Quarter. The climate of Chicago is particularly well adapted to midsummer work. Instruction in all departments is given in the Summer Quarter.

DEFINITION OF MAJOR AND MINOR

A Major course is defined as a didactic or recitation course, occupying 5 hours a week for one quarter (a total of 60 hours), or a laboratory, practical, or clinical course, occupying 10 hours a week for one quarter (a total of 120 hours). A double major occupies twice the number of hours per week for the quarter.

A Minor course is a didactic or recitation course, occupying 5 hours a week for one-half a quarter, or six weeks; or a laboratory course, occupying 10 hours per week for a similar period. The value of each course in the following departmental statements is stated as a *major* (Mj.), a *double major* (DMj.), a *minor* (M.), a *double minor* (DM.), or the decimal fraction of a *major* or *minor*.

GRADUATE COURSES IN MEDICINE FOR PHYSICIANS AND ADVANCED STUDENTS

Opportunities are afforded to physicians and graduate students at Rush Medical College and at the University for advanced and research work in Physics, Chemistry, Zoölogy and Embryology, Anatomy, Neurology, Psychology, Physiology, Physiological Chemistry, and Pharmacology, and in Pathology and Bacteriology in Medicine, Surgery, Obstetrics, Gynecology, and in the other clinical departments. Research work may be conducted independently or under the direction of an instructor in the department to which it belongs.

Physicians are admitted on payment of the matriculation fee and payment of fees in proportion to the amount of work taken (see p. 38). The applicant's fitness for any course which he desires to take should be ascertained by consultation with the heads of the respective departments.

All of the courses offered are well adapted to students of this class, and they are outlined in pp. 44-84 of this *Circular*. Correspondence is invited in reference to special work other than the courses offered. It will be sufficient to address letters in reference to such courses to Rush Medical College. Undergraduates are given preference in registering for courses which are restricted to a small group of students.

Students desiring to engage in work leading to the degrees of Master of Science, Master of Arts, Master of Philosophy, or to the degree of Doctor of Philosophy are requested to write for the *Circular of Information* of the Graduate Schools of the University of Chicago.

THE WORK OF THE MEDICAL COURSE FOR THE FRESHMAN AND SOPHOMORE YEARS

1. *Outline of the course.*—The course for the first two years' work in Medicine consists mainly of instruction in the fundamental medical sciences: Human Anatomy, Microscopic Anatomy, Histology, Neurology, Embryology, Physiology, Physiological Chemistry, Toxicology, Pharmacology, Bacteriology, and Pathology. All this work is given at the University of Chicago.

2. *Amount of work.*—The amount of work required is 18 majors.

3. *The curriculum.*—The following courses constitute the curriculum recommended for and pursued by the majority of the students:¹

a) *Chemistry*, The Chemistry of Medicinal Drugs, $\frac{1}{2}$ major (85).²

b) *Anatomy*, $6\frac{1}{2}$ majors as follows: Human Anatomy (Dissecting), $3\frac{1}{2}$ majors (1, 2, 3, 4); Splanchnology, Histology, and Cytology, 1 major (10); Embryology, 1 major (Zoölogy 20 or 21); Neurology, 1 major (Anatomy 17).

c) *Physiology*

d) *Physiological*

Chemistry and
Pharmacology

} 6 majors as follows: Physiology, 3 majors (12, 13, 14);
Physiological Chemistry, 2 majors (19 and 20); Pharmacology, 1 major (21).

e) *Pathology*, 2 majors as follows: Pathology (1 and 2).

f) *Hygiene and Bacteriology*, $1\frac{1}{2}$ majors as follows: Bacteriology (2).

g) Two majors in any branch or branches of the student's choice, as approved by the Faculty.

¹ Detailed statements concerning the courses are given under the various departments of instruction. They should be consulted in every case in regard to equivalent courses which may be submitted for those whose numbers are given in the foregoing schedule.

² The numbers in parentheses refer to the course numbers in the corresponding department.

4. *Election of medical courses.*—Students with adequate preparation and special qualifications are permitted to elect other courses (usually advanced or research work) in lieu of some of those above prescribed.

In electing his work the student should bear in mind: (a) That the right of election must be confirmed in writing in advance by the Dean and by the head of the department concerned; (b) that his registration for each quarter must receive the approval of the Dean; (c) that the prerequisites for any course must have been satisfied before the course can be elected; (d) that a minimum amount of work in the several branches is required for graduation in Medicine.

5. *Arrangement of courses.*—The order of courses has been arranged in such a way as to insure so far as possible for the student beginning his medical studies with any single quarter of the year a complete annual course during any three consecutive quarters; *but students must begin their medical work proper with the Autumn or Spring Quarter.*

ARRANGEMENT OF COURSES FOR SIX QUARTERS

Many of the required medical courses are given twice or, including the Summer Quarter, three times in one year. The fifteen majors of required and three majors of elective work may be taken in any order or combination desired by the student, provided he has the necessary preparation for each course when taken, as indicated by the prerequisite courses.

The sequence of courses recommended for the student during the six quarters of the Freshman and Sophomore years of the Medical Curriculum is indicated in the appended outline. In case the student is unable to secure the group of courses recommended for any quarter in his sequence, courses which may be taken as alternatives are indicated in italics.

FIRST QUARTER

Recommended:

Dissection, 2Mjs., Anatomy 1, 2
Histology, Mj., Anatomy 10
Elective, $\frac{1}{2}$ Mj.

Permissible:

Embryology, Mj., Zoölogy 20
Anatomy 10A, Mj.

Prerequisite: Anatomy 10
Physiological Chemistry 19, Mj.
Bacteriology 2B, 1½Mjs.

SECOND QUARTER

Recommended:

Dissection, Mj., Anatomy 3 or 4
Neurology, Mj., Anatomy 17
Prerequisite: Histology
Physiological Chemistry, Mj., Physiology 19
Prerequisite: Organic Chemistry

Permissible:

Embryology, Mj., Zoölogy 20
Physiology 12, Mj.
Bacteriology 2B, Mj.

THIRD QUARTER

Recommended:

Embryology, Mj., Zoölogy 20
Dissection, Mj., Anatomy 3 or 4
Physiology, Mj., Physiology 12
Prerequisite: Physiological Chemistry, Physiology 19

Permissible:

Physiological Chemistry, Mj.
Prerequisite: Physiological Chemistry 19
Bacteriology 2B, 1½Mjs.
Elective, Mj.

FOURTH QUARTER

Recommended:

Physiology, Mj., Physiology 13
Prerequisite: Physiology 12
Physiological Chemistry, Mj., Physiology 20, or
Bacteriology, 1½Mjs., Bacteriology 2, or
Pathology, Mj., Pathology 1
Prerequisite: Bacteriology 2

*Permissible:**Pathology 1, Mj.**Physiology 14, Mj.**Prerequisite: Neurology**Elective, Mj.**Permissible:**Pathology 2, Mj.**Prerequisite: Pathology 1**Elective, 1 or 2 Mjs.*

FIFTH QUARTER

*Recommended:**Physiology, Mj., Physiology 14**Pharmacology, Mj., Physiological**Chemistry 21**Prerequisite: Physiology 12, 13,**14; Physiological Chemistry**19 and 20**Pathology, Mj., Pathology 1*

SIXTH QUARTER

*Recommended:**Pathology 2, Mj.**Chemistry 85, Mj.**Permissible:**Elective, 1 or 2 Mjs.*

Students are strongly advised to take Histology and Embryology as part of the college work required for admission. It is of decided advantage to complete these courses before beginning Gross Anatomy (Dissection.)

Organic Chemistry is an entrance requirement and is not considered as a course in Medicine.

THE WORK OF THE CLINICAL YEARS

Elective and optional courses.—A certain number of courses, especially in the Freshman and Sophomore years of study, are required as essential to securing credit in making up the four-year curriculum which must precede graduation. All of the courses offered in the Junior and Senior years are elective; that is, the student will be required to select from the list of elective courses a number sufficient to insure him credit for about eleven majors each year. The term "major" is fully explained in another paragraph. By this system the student can select not only his line of study, but also his teachers in such special lines, and can, further, so arrange his work that in successive years he can practically include all branches taught in the College. He will be required to present, however, a minimum amount of credit in each department. See requirements for graduation (p. 32).

Advice by the head of each department as to the recommended sequence of courses is contained in a circular of information issued to each student at the beginning of the Autumn Quarter.

The quarter system with elective courses is especially well adapted to the medical curriculum, and possesses the advantages of allowing each student to select a portion of his studies, and so to adapt his course to his tastes, his abilities, and his needs. The plan is *not* designed, however, to enable a student to prepare for a special line of practice. A broad and thorough education in general medicine is essential for adequate preparation for special practice in later years.

Optional courses, in addition to those described above, are offered to students who desire to add to the regular courses as outlined in the requirements for graduation. These optional courses are designed to promote a higher scholarship and to increase facilities for work in special departments.

FIFTH YEAR

A FIFTH YEAR IS NOW REQUIRED FOR GRADUATION.

The work of this fifth year consists of:

A. An internship in a hospital approved by the Faculty and taken under condition prescribed by the Faculty, or

B. Advanced work as a Fellow or Research Student in one of the departments of the College, including clinical work, with the presentation of a dissertation embodying original work.

I. THE DEPARTMENT OF ANATOMY

(INCLUDING, AT THE UNIVERSITY, COURSES IN THE DEPARTMENT OF ZOÖLOGY)

OFFICERS OF INSTRUCTION

ROBERT RUSSELL BENSLEY, A.B., M.B., Professor of Anatomy.

CHARLES JUDSON HERRICK, Ph.D., Professor of Neurology.

BASIL COLEMAN HYATT HARVEY, A.B., M.B., Professor of Anatomy.

PRESTON KYES, A.M., M.D., Professor of Preventive Medicine.

GEORGE WILLIAM BARTELMEZ, Ph.D., Associate Professor of Anatomy.

ELBERT CLARK, S.B., M.D., Ph.D., Associate Professor of Anatomy; Major, Medical Corps, United States Army.

CHARLES HENRY SWIFT, M.D., Ph.D., Assistant Professor of Anatomy.

CLARK OWEN MELICK, S.B., Instructor in Preventive Medicine.

MARION HINES, A.B., Ph.D., Instructor in Anatomy.

RICHARD W. WATKINS, S.B., Associate in Anatomy.

JEANNETTE BROWN OBENCHAIN, Ph.B., Research Assistant in Anatomy.

FELLOW, 1919-20

THEODORE H. BAST, A.B.

INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology. Two majors of elementary biology (Zoölogy 1 and Botany 1, or their equivalent) are prerequisite for all courses in the Department except course 16.

Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy (Zoölogy 17) and vertebrate embryology precede the work in human anatomy. The recommended order of courses in preparation for work in human anatomy would thus be as follows: Zoölogy 1, Botany 1, Zoölogy 17, Anatomy 10, and Zoölogy 20.

All students taking courses in Anatomy should have a good knowledge of French and German. For graduate students this is indispensable.

UNDERGRADUATE SEQUENCES

I. PRINCIPAL SEQUENCE

Zoölogy 17, Zoölogy 20, Anatomy 1, 2, 3, 4, 10, 11, 17, 21.

II. SECONDARY SEQUENCE

Zoölogy 17, Zoölogy 20, Anatomy 10, and three majors selected from Anatomy 1, 2, 3, 4, 17, 21.

CANDIDACY FOR HIGHER DEGREES

All candidates for the degree of Doctor of Philosophy in Anatomy should have undergraduate credit for courses 1, 2, 3, 4, 10, 17, or their equivalent. Graduate courses will be selected after consultation with the Department. Students taking Anatomy as a minor subject for this degree are required to take courses 1, 2, 3, 4, 10, 17, 21, and three majors selected from courses 22-40.

Candidates for the degree of Master of Science in Anatomy are required to take courses in Anatomy amounting to nine majors, of which three majors must be in research work chosen from courses 28, 29, 30, 31, 41, 42, 43.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1, 2, 3, 4, Human Dissection.—The student makes a complete dissection of all structures, using atlases and textbooks as guides. The work is largely independent. Before receiving credit for his final dissection the student will be required to pass an oral examination on the anatomy of the whole body. Laboratory fee, \$5.00 per major. Lectures, 2:00, M., W., F.; laboratory work, 2:00-5:00, M. to F. 3½Mjs. Autumn, Winter, Spring, PROFESSOR HARVEY.

Courses 1 and 2.—Dissection of upper and lower extremities. 1½Mjs.

Course 3.—Dissection of thorax and abdomen. 1Mj.

Course 4.—Dissection of head and neck. 1Mj.

10. Histology.—A brief course on the structure of the cell and elementary tissues will be followed by a systematic study of the structure of organs. Laboratory fee, \$5.00. Mj. Summer, MR. WATKINS; Autumn, ASSOCIATE PROFESSOR BARTELMEZ, ASSISTANT PROFESSOR SWIFT, DR. HINES, AND MR. WATKINS.

10A. Histology.—A supplementary course to course 10. ½Mj. ASSOCIATE PROFESSOR BARTELMEZ. [Not given in 1919.]

11, 12. Advanced Histology.—Laboratory fee, \$5.00. Mj. Autumn and Winter, PROFESSOR BENSLEY.

16. Elementary Neurology.—Prerequisite: for undergraduate students, elementary biology or human physiology with laboratory work; graduate students may be admitted without this prerequisite. Medical credit in neurology is not given for this course. Mj. Autumn, 8:15 to 10:15, M.-F., PROFESSOR HERRICK.

17. Anatomy of the Nervous System.—An introductory course for medical students and others. Prerequisite: course 10. Laboratory fee, \$5.00. Mj. Summer, Winter, and Spring. PROFESSOR HERRICK.

19. Cytology of Nerve Cells.—Hours to be arranged. Mj. or ½Mj. Winter, ASSOCIATE PROFESSOR BARTELMEZ.

20. Development of the Skeleton.—Hours to be arranged. ½Mj. Spring, ASSOCIATE PROFESSOR BARTELMEZ.

21. Morphology of the Blood.—Mj. or ½Mj. Summer and Winter, DR. HINES.

22. Anatomy of the Foetus and Infant.—Mj. or ½Mj. ASSISTANT PROFESSOR SWIFT. Autumn, Winter, and Spring.

II. GRADUATE COURSES

25. Comparative Neurology.—The evolution of the architecture and function of the vertebrate nervous system. Prerequisite: course 16 or 17. Mj. Autumn, PROFESSOR HERRICK.

28, 29, 30. Neurological Research.—Admission to these courses may be obtained only after consultation with the Professor of Neurology. A good knowledge of general anatomy, physiology, and neurology will be required. 3Mjs. or 3DMjs. Autumn, Winter, Spring, and Summer, PROFESSOR HERRICK.

31. Immunology.—Consideration of susceptibility and resistance to disease with special reference to the mechanism of host defense in the bacterial infections. Mj. or DMj. Autumn and Spring, PROFESSOR KYES.

31A. Immunology.—Continuation of course 31 with special reference to the qualitative and quantitative toxins and to immune sera. Mj. or DMj. Winter and Summer, MR. MELICK.

32. Research in Immunology.—Mj. or DMj. Autumn, Winter, Spring, and Summer, PROFESSOR KYES AND MR. MELICK.

34. Origin and History of the Germ Cells.—Mj. or $\frac{1}{2}$ Mj. Spring, DR. SWIFT.

37. Histology of the Organs of Internal Secretion.—Mj. Spring, PROFESSOR BENSLEY.

38. Morphology of the Blood and Blood-forming Organs.—Mj. or $\frac{1}{2}$ Mj. Spring, DR. HINES.

39. Organogeny (Human).—A practical course on the development of organs in the human embryo. Prerequisite: Vertebrate Embryology. Laboratory fee, \$5.00. Mj. Spring, ASSOCIATE PROFESSOR BARTELMEZ. [Not given in 1919–20.]

40. Advanced Work.—Opportunities are offered for advanced work in all branches of anatomy. Laboratory fee, \$5.00 per Mj. PROFESSOR BENSLEY, PROFESSOR HERRICK, PROFESSOR HARVEY, AND OTHERS.

41, 42, 43. Research Work.—The laboratory is equipped for the investigation of anatomical problems. Suitably trained persons, who have the time to do such work, will be encouraged to undertake it. PROFESSOR BENSLEY, PROFESSOR HARVEY, ASSOCIATE PROFESSOR BARTELMEZ, AND ASSISTANT PROFESSOR SWIFT.

45, 46, 47. Seminar.—A limited number of students may, by arrangement with the Professor of Anatomy, be admitted to a seminar in which subjects of current interest in anatomy will be discussed. $\frac{1}{2}$ Mj. Autumn, Winter, and Spring, PROFESSOR BENSLEY.

THE DEPARTMENT OF ZOÖLOGY

OFFICERS OF INSTRUCTION

FRANK RATTRAY LILLIE, PH.D., Professor of Embryology and Chairman of the Department of Zoölogy.

CHARLES MANNING CHILD, PH.D., Professor of Zoölogy.

HORATIO HACKETT NEWMAN, PH.D., Professor of Zoölogy.

MORRIS MILLER WELLS, PH.D. (resigned), Assistant Professor of Zoölogy.

WILLIAM J. CROZIER, PH.D., Assistant Professor of Zoölogy.

CARL RICHARD MOORE, PH.D., Instructor in Zoölogy.

ALBERT W. BELLOMY, PH.D., Associate in Zoölogy.

BENJAMIN H. WILLIER, S.B., Assistant in Zoölogy.

———, Associate in Zoölogy.

LIBBIE HENRIETTA HYMAN, Ph.D., Research Assistant in Zoölogy.

MARIE AGNES HINRICHS, Assistant in Zoölogy.

———, Assistant in Zoölogy.

FELLOWS, 1919-20

HELEN JEANETTE ALLEN, A.B.

FRANCIS HUNTINGTON SCOTT, A.B.

INTRODUCTORY

The courses in Zoölogy aim to meet the needs of those students who desire to obtain some knowledge of Zoölogy as part of their general education, those who need work in Zoölogy to satisfy the requirements of other departments, and those who propose to specialize in Zoölogy. The leading purpose of the courses is to present the subject-matter of the science, its guiding ideas, its principal subdivisions, its scope, methods, and history, and its relations to other sciences.

Undergraduate work in Zoölogy.—It is advisable that students who propose to *specialize* in Zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of French and German. More specifically, students specializing in Zoölogy should take 4 or 5 majors in Chemistry, 2 or 3 in Physics, and 1 or 2 in Geology; they should also obtain knowledge of the general principles of microscopical Anatomy, Paleontology, Botany, and Physiology. These courses may be taken concurrently with the work in Zoölogy. Consultation with reference to the sequence of courses taken in the Department is required. (See the *Undergraduate Course Book*.)

COURSES AVAILABLE FOR UNDERGRADUATE SEQUENCES

For students who have had less than a unit of Zoölogy in high school, course 1 is prerequisite for all courses except 5 and 7. Students presenting credits for one unit of Zoölogy in high school may begin with course 7 or 15, but will be required to supplement their sequence by taking course 5. Courses 15, 16, and 17 may be taken in any order.

SECONDARY SEQUENCE

5, 7 or 15, 16, 17, 18, 19.

PRINCIPAL SEQUENCES

a) General: Secondary sequence, with the addition of course 40 and two majors selected from 26-35. This sequence is intended primarily for teachers in the secondary schools.

b) Genetics and Experimental Zoölogy: Secondary sequence, with 3 majors as from Courses 30-35.

c) Ecology and Behavior: Secondary sequence, with the addition of courses 26, 28, and 29.

COMBINATION NINE-MAJOR SEQUENCES

a) Zoölogy-Botany: Zoölogy 5, 7, 16, 17, 20 and Botany 2 or 3, 7, 8, and 9.

b) Comparative Anatomy: Zoölogy 15, 16, 17, 18, 19; Anatomy 10, 1, 2, 3.

Graduate work in Zoölogy.—Students proposing to undertake graduate work in Zoölogy should have credit for an undergraduate principal sequence in Zoölogy or its equivalent. They should also be grounded in other sciences as noted above; and a reading knowledge of German and French is required for candidacy for the degree of Doctor of Philosophy. The plan of the graduate courses involves

three or four majors of formal courses and three majors or more of seminar courses in addition to research work in the Department. Certain courses from other departments depending on the student's preparation are also required. For the degree of Doctor of Philosophy the research work will usually extend over a period of three years. For the Master's degree Zoölogy 1, 5, 7, or 15, 16, and 17, or their equivalent, eight majors of graduate work, and a dissertation are required.

The Zoölogical Club.—The members of the staff and the advanced students of the Department form a club which meets weekly for the presentation of the research work of members of the Department and for review and discussion of important new literature. The meetings are open to all students in the Department.

COURSES OF INSTRUCTION

Zoölogy 1 or its equivalent is prerequisite for all the Senior College courses in the Department. But course 5 or 7 may be accepted as its equivalent for advanced work in the Department at the option of the instructor offering advanced courses.

I. JUNIOR COLLEGE COURSES

1. Elementary Zoölogy.—Lectures and laboratory work constituting an introduction to the general principles and concepts of Zoölogy. Laboratory fee, \$5.00. Mj. Autumn, sec. *a*, PROFESSOR NEWMAN; sec. *b*, ASSISTANT PROFESSOR CROZIER; Winter, ASSISTANT PROFESSOR CROZIER; DM. Summer, First Term, PROFESSOR NEWMAN.

5. Evolution, Genetics, and Eugenics.—An elementary course dealing with the history and principles of Evolution and Genetics and their application to modern experimental evolution and eugenics. Lectures, reading, and recitations. Mj. Summer, Autumn, DR. BELLOMY; Spring, PROFESSOR NEWMAN.

7. Field Zoölogy.—Based largely upon the habits and distribution of invertebrates; other animals encountered in the field receive attention. Lectures, laboratory, and field trips. Week-day field trips confined to the regular laboratory hours. Saturday field trips are optional for the most part. Laboratory fee, \$5.00. Mj. Spring, ASSISTANT PROFESSOR CROZIER.

II. SENIOR COLLEGE COURSES

NOTE.—Courses 15, 16, and 17 constitute a sequence running through the year. In special cases students who have credit for Botany 1, or who have studied Zoölogy in high school, may be admitted to the sequence without other prerequisites. Permission for such registration must be secured from the Department.

15. Invertebrate Zoölogy.—Study of representatives of the lower invertebrate groups, including the anatomy of the adult and the life-history, together with some discussion of the habits and distribution. Prerequisite: Zoölogy 1 or 5. Lectures, laboratory work, and demonstrations. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR CHILD.

16. Invertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of invertebrate groups not considered in courses 1 or 15. Prerequisite: Zoölogy 1, or equivalent. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR NEWMAN.

17. Vertebrate Zoölogy.—Comparative anatomy, development, and phylogeny of vertebrates. Prerequisite: Zoölogy 1 or 5, or equivalent. Laboratory fee, \$5.00. DM. Summer, First Term, PROFESSOR NEWMAN; Winter, sec. *a*, DR. MOORE; sec. *b*, PROFESSOR NEWMAN; Spring, PROFESSOR NEWMAN.

18. Embryology.—The early stages of development of invertebrates and vertebrates, including maturation and fertilization of the ovum, cleavage, and the formation of the germ layers; origin of the embryo. Embryological theories. Embryological technique. Prerequisite: Zoölogy 15, 16, 17, or their equivalents. Laboratory fee, \$5.00. Mj. Autumn, PROFESSOR LILLIE.

19. Embryology.—Continuation of course 18. Later development, especially of vertebrates. Prerequisite: Zoölogy 18. Laboratory fee, \$5.00. Mj. Winter, PROFESSOR LILLIE.

20. Vertebrate Embryology (for medical students).—Birds and mammals. Lectures, demonstrations, and laboratory work. Prerequisite: Zoölogy 1 and Anatomy 10, or their equivalents; Zoölogy 17 strongly advised. Laboratory fee, \$5.00. Mj. Autumn, DR. MOORE; Mj. Spring, PROFESSOR LILLIE, DR. MOORE, AND ASSISTANTS. Mj. Summer, DR. MOORE.

26. Animal Behavior and Ecology.—The structural and functional basis of animal conduct. Prerequisite: Zoölogy 1 or 7. Laboratory fee, \$2.50 per M. Mj. (or M. First Term) Summer and Autumn, ASSISTANT PROFESSOR CROZIER.

27. Parasitology.—Animal parasites, with special reference to man, and to the part taken by insects in the distribution of disease. Prerequisite: two majors of Zoölogy. Laboratory fee, \$5.00. Mj. Spring, ASSISTANT PROFESSOR ———.

30. Genetics and Experimental Evolution.—The course uses as far as possible both animal and plant forms to illustrate the principles of Genetics and the problems of Experimental Evolution. The course provides opportunity for practical work and training in the use of modern genetic operations and an introduction to research. Laboratory, conferences, lectures. Prerequisite: Zoölogy 1 and 5, and Botany 1, or their equivalent. Laboratory fee, \$5.00. Mj. or DMj. Winter and Spring, DR. BELLOMY.

33-35. Physiological Zoölogy.—The course is concerned with the physiological and dynamic aspects of Zoölogy and consists primarily of laboratory work, which is supplemented by conferences and reading. Individual work, intended as training in methods, illustrations of principles, and preparation for research, is assigned to each student. Work may begin in any quarter. Prerequisite: Zoölogy 1 (or 15), 16, 17, or their equivalent. Laboratory fee, \$5.00. Mj. or DMj. Autumn, Winter, and Spring, PROFESSOR CHILD.

39. Marine Biology (at the Marine Biological Laboratory at Woods Hole, Mass.).—Credit is given at the University of Chicago for courses taken at this laboratory. DMj. Summer, PROFESSOR LILLIE.

40. The Teaching of Zoölogy.—This course touches briefly the history of the introduction of science-teaching and the significance of the movement, and discusses present tendencies, courses of study, textbooks, and the principles involved in the selection of subject-matter, its arrangement, and presentation. M. Summer, First Term, ASSOCIATE PROFESSOR DOWNING.

III. GRADUATE COURSES

45. Physiology of Development.—A consideration of existing data and views as material for a theory of development and heredity. Lectures, conferences, assigned topics. Prerequisite: Zoölogy 18 and 19, or equivalent. Mj. Autumn, PROFESSOR LILLIE.

47. Individuation and Reproduction.—A consideration of the problem of organic individuality and the processes and conditions of individuation and reproduction. The relations between regulatory processes, experimental reproductions, and the various processes of reproduction in nature. The work of the course will consist of lectures, reports, and discussion of literature and quizzes. Mj. Spring, PROFESSOR CHILD. [Not given in 1920.]

48. Cytological Problems.—Among the subjects considered are: morphology and physiology of the cell, cell division, the cell and the organism in growth, reproduction and regulation, the various methods of cytological research, their objects and their value. The work of the course consists of lectures, reports, discussions, and quizzes. Mj. Spring, PROFESSOR CHILD.

49. Problems in Animal Morphology and Phylogeny.—A course in methods of research for advanced undergraduate and first-year graduate students. Individual instruction and advice will be given as to methods of attacking problems, sources of literature, etc. Simple practice problems will be assigned if desired. Mj. every quarter; individual work, PROFESSOR NEWMAN.

IV. SEMINAR COURSES

60. Problems of Fertilization.—A consideration of the historical development and present status of the problems of fertilization. Prerequisite: Zoölogy 45, 46, and either 47 or 48. Mj. Spring. PROFESSOR LILLIE. [Not given in 1920.]

60A. The Biology of Sex.—A consideration of the biological problems of sex. Prerequisite: Zoölogy 45, 46, and either 47 or 48. Mj. Spring, PROFESSOR LILLIE.

63. The Problem of Reproduction in Organisms.—A study of the facts and theories concerning the various methods of reproduction in organisms; the effect of physiological and physical isolation of parts in nature and experiment; the germ-plasm theory in relation to the data of observation and experiments. Special topics will be assigned to each student for report and discussion. Prerequisite: Zoölogy 45, 46, and 47, or their equivalent. Mj. Winter, PROFESSOR CHILD.

64. Senescence and Rejuvenescence.—A study of the facts and theories bearing upon the problem of age in organisms. The physiological and structural changes during ageing. The question of rejuvenescence. Prerequisite: Zoölogy 45, 46, and 47 or 48, or their equivalent. Mj. Winter, PROFESSOR CHILD. [Not given in 1920.]

V. RESEARCH COURSES

70. Zoölogical Problems.—Research at the Marine Biological Laboratory, Woods Hole, Mass. Prerequisite: such of the elementary courses as are essential to the special topic undertaken. 2 or 3Mjs. Summer, PROFESSOR LILLIE.

71. Zoölogical Problems.—Research. Laboratory fee, \$5.00. 1 to 3Mjs. Summer, PROFESSOR NEWMAN.

72, 73, 74. Zoölogical Problems.—Research work. For graduate students. Prerequisite: training essential to the special topic undertaken. Laboratory fee, \$5.00. 1 to 3Mjs. Autumn, Winter, and Spring, PROFESSORS LILLIE, CHILD, AND NEWMAN, AND ASSISTANT PROFESSOR WELLS.

II. THE DEPARTMENT OF PHYSIOLOGY

OFFICERS OF INSTRUCTION

†ANTON JULIUS CARLSON, PH.D., Professor of Physiology and Chairman of the Department. Lieut.-Colonel, M.C., U.S.A.

DAVID JUDSON LINGLE, PH.D., Assistant Professor of Physiology.

ARNO BENEDICT LUCKHARDT, PH.D., M.D., Assistant Professor of Physiology.

ARTHUR LAWRIE TATUM, PH.D., M.D., Assistant Professor of Physiology (Spring Quarter).

FRED TERRY ROGERS, PH.D., Assistant Professor of Physiology.

ANDREW C. IVY, PH.D., Instructor in Physiology.

EDWARD C. MASON, A.B., Associate in Physiology (Spring Quarter).

EMMA KOHMAN, B.S., Associate in Physiology.

BERNARD RAYMUND, M.S., Assistant in Physiology (Spring Quarter).

INTRODUCTORY

The courses of the Department of Physiology are arranged for three classes of students:

I. Junior or Senior College students who wish to acquire a knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a three-major course is given: courses 1, 2, and

† Absent on leave.

3, Introductory Physiology. In order to make it accessible to a large number of students, no prerequisites are demanded.¹

II. Students wishing to specialize in Physiology, or students of other biological sciences who wish to take minor work in Physiology.

III. Medical students. This work is covered by courses 12, 13, and 14.

For all courses except 1, 2, 3, and 4, General Biology and General Inorganic Chemistry, or equivalent courses, are prerequisite. For each major or double-minor course requiring laboratory work, the laboratory fee is \$5.00.

UNDERGRADUATE SEQUENCES

The Department recommends that students taking Physiology as a major subject should pursue the following courses in introduction: Physics, 1, 2, 3, 4; Chemistry, 2S, 3S, 4, 6, 8; Physiology 1, 2; Zoölogy 1, or Botany 1B; Geology 1. In addition one course in the Comparative Anatomy of Vertebrates.

I. PRINCIPAL SEQUENCES

Zoölogy 20, Anatomy 10, Bacteriology 1, Physiology 12, 13, 14, Physiological Chemistry 19, 20, Anatomy 17, or Psychology 1.

II. SECONDARY SEQUENCES

(Prerequisite: Botany 2B, Physiology 1, 2), Zoölogy 20, Anatomy 10, Physiological Chemistry 19, Bacteriology 1, Physiology 12, 13, Psychology 1.

THE BACHELOR'S DEGREE

Senior College students wishing to take their S.B. degree in Physiology should take courses 1, 2, 12, 13, 14. Courses in Chemistry, Physiological Chemistry, Physics, Histology, Bacteriology, Embryology, and Plant Physiology to the extent of three to four majors may be accepted as part of the total of nine majors required for graduation.

THE MASTER'S DEGREE

The requirements for the Master's degree, if all the work is taken in this Department, are: (1) Research, three majors (course 44); (2) six majors from the Graduate or Senior College courses; (3) dissertation. The Senior College courses that may be counted toward the Master's degree are 12, 13, 14.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Courses 12, 13, 14, or their equivalents, are required of all candidates for the Doctor's degree, with Physiology as the major subject. The further selection of courses is arranged in each case by consultation.

COURSES OF INSTRUCTION

I. JUNIOR COLLEGE COURSES

Courses 1, 2, and 3 are intended to familiarize the student with the facts concerning the structure and functions of the human body. Students are urged to take all three courses.

1. Physiology of Blood, Respiration, Digestion, Secretion, and Absorption.—Lectures and laboratory. Laboratory fee, \$5.00. Mj. Autumn and Winter, ASSISTANT PROFESSOR LINGLE AND MISS KOHMAN.

¹ Students who wish to get the most possible out of the course are strongly urged to take elementary general Chemistry and general Biology before beginning the work. As the accommodations are limited, preference in registration will be given to those students who will arrange their work so as to be able to take 1, 2, and 3.

2. Physiology of Circulation.—Muscle, peripheral nerves, animal heat, excretion. Laboratory fee, \$5.00. Mj. Winter and Spring, ASSISTANT PROFESSOR LINGLE AND MISS KOHMAN.

3. Physiology of the Brain, Cord, Eye, Ear.—Sense of taste, smell, pressure, temperature, and muscle sense. Laboratory fee, \$5.00. Mj. Spring and Autumn, ASSISTANT PROFESSOR LINGLE AND MISS KOHMAN.

4. Human Physiology.—Selected topics especially adapted to teachers. Lectures and laboratory work. Laboratory fee, \$5.00. Mj. Summer, DR. ROGERS AND MISS KOHMAN.

II. SENIOR COLLEGE COURSES

12. Physiology of Blood, Circulation, and Respiration.—Lectures and recitations, 3 hours a week; laboratory work, 6 hours a week. Prerequisite: Physiological Chemistry. Laboratory fee, \$5.00. Mj. Spring and Autumn, PROFESSOR CARLSON, ASSISTANT PROFESSORS LUCKHARDT, TATUM, AND ROGERS, DR. IVY, AND MESSRS. RAYMUND AND MASON.

13. Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscles, and Heat.—Lectures and recitations, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Physiology 12. Laboratory fee, \$5.00. Mj. Summer, Autumn, ASSISTANT PROFESSORS LUCKHARDT AND ROGERS, DR. IVY, AND MR. RAYMUND.

14. Physiology of the Nervous System and the Senses.—Lectures, two a week; recitation and conference, one a week; laboratory, 6 hours a week. Prerequisite: Neurology 17. Laboratory fee, \$5.00. Mj. Winter, Summer, 1920. PROFESSOR CARLSON, ASSISTANT PROFESSORS LUCKHARDT AND ROGERS, DR. IVY, AND MR. RAYMUND.

16. Special Physiology of Mammals.—Including the experiments not given in the general courses. Prerequisite: Physiology 12, 13, or 14, or equivalent. Laboratory fee, \$2.50. $\frac{1}{2}$ Mj. Summer and Autumn, ASSISTANT PROFESSOR LUCKHARDT.

18. The Principles of Physiology.—As they are applied to the clinical examination of the central nervous system and special senses. Laboratory fee, \$2.50. $\frac{1}{2}$ Mj. Spring, ASSISTANT PROFESSOR LUCKHARDT.

III. PRIMARILY FOR GRADUATE STUDENTS

32. Special Physiology of the Glands of Internal Secretion.—Laboratory fee, \$5.00. Mj. Autumn and Spring, PROFESSOR CARLSON AND DR. IVY.

41. Seminar in Physiology.—Weekly. Mj. Summer, Autumn, Winter, and Spring, PROFESSOR CARLSON, ASSISTANT PROFESSORS LUCKHARDT, TATUM, AND ROGERS, AND DR. IVY.

44. Research Work in Physiology.—Mj. or DMj. each Quarter, ASSISTANT PROFESSORS LUCKHARDT, TATUM, AND ROGERS, AND DR. IVY.

IIA. THE DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

A. OFFICERS OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

FRED CONRAD KOCH, PH.D., Assistant Professor of Physiological Chemistry and Acting Chairman.

HOWARD MARTIN SHEAFF, PH.D., Instructor in Physiological Chemistry.

JOHN VINCENT LAWRENCE, S.B., Associate in Physiological Chemistry.

HERBERT ELLIS LANDES, B.A., Assistant in Physiological Chemistry.

JAY MCKINLEY GARNER, S.B., Assistant in Physiological Chemistry.

FELLOWS, 1919-20

HAROLD CLIFFORD GOLDTHORPE, S.B.

ROGER JOHN WILLIAMS, S.B., Fleischman Fellow.

B. OFFICERS OF INSTRUCTION IN PHARMACOLOGY

ARTHUR LAWRIE TATUM, PH.D., M.D., Assistant Professor of Pharmacology and Physiology.

EDWARD CHARLES MASON, A.B., Associate in Pharmacology and Physiology.

ROBERT EARL GROGAN, S.B., Assistant in Pharmacology and Physiology.

EDMUND FRANCIS FOLEY, S.B., Assistant in Pharmacology.

INTRODUCTORY

Physiological Chemistry, or Biochemistry, has as its field the chemistry of the cells and tissues of plants and animals, the principles of nutrition, the chemistry of the internal secretions, the chemical correlation of the organs of the body, the chemistry of the digestive processes and of the secretions and excretions; the chemical basis of such problems as those of pigmentation, inheritance, fertilization, irritability, and so on. It has to do also with the derangement of chemical processes in disease. The science thus stands in a close and complementary relation with zoölogy, botany, anatomy, pathology, physical physiology, and bacteriology on the one hand and with chemistry on the other.

Pharmacology deals with the chemistry of drugs, the detection of poisons, the nature and mode of action of chemical agents on organisms, and with the alterations of the physiological processes of the body produced by chemical agents of all kinds. It is a kind of bridge between physiology and therapeutics.

Of the courses offered in this Department, 19 and 20 are intended for medical and graduate students. They embrace the chemistry of the cells and tissues, of digestion, and of the excretions. They are the minimum requirement for students of medicine in Physiological Chemistry. Medical students who wish to take more advanced work are advised to take course 27 or 28, or both. Many of the methods learned in these courses are of value in medical research and in clinical work.

Graduate students in Physiological Chemistry or in other departments must take courses 19 and 20 or the equivalent. For more advanced work they are advised to choose from courses 27, 28, 29, 30, 37, and 38, depending on the nature of their field of work. Course 27 is strongly recommended for all graduate students taking Physiological Chemistry as a minor. Courses 28 and 37 give the practical training in methods as applied to blood, urine, and tissues. Course 37 is good training for those who intend to enter government service or commercial laboratories dealing particularly with foods and drugs and their control. Students requiring more special training in Physiological Chemistry should take courses 27, 28, 29 (or 30), and 38.

In Pharmacology course 21 covers the principles of the pharmacodynamic action of drugs and is particularly intended for medical students.

The Department is particularly desirous of stimulating research, but only when the student has been properly prepared to do the work well. After the research is under way the student is advised to devote practically all of his time to that study rather than to taking unrelated courses of instruction.

UNDERGRADUATE SEQUENCES

Since Physiological Chemistry involves a thorough training in both chemistry and biology it can only be studied after preparation in these other sciences. For that reason it cannot usually be undertaken before the third college year. The college sequence of studies in this Department may embrace for a principal sequence courses 19 and 20, at least three majors of Chemistry, and the other four majors from the Departments of Physiology, Anatomy, Zoölogy, Botany, Bacteriology, or Physics; for the secondary sequence three or four majors of Chemistry, courses 19 and 20, and a major from any other department of science.

The Department recommends that students taking Physiological Chemistry as a major subject should pursue the following courses in introduction: Physics 1, 2, 3, 4; Chemistry 2S, 3S, 4, 6, 8; Physiology 1, 2, or Zoölogy 1 or 15; Botany 1 and 2; Geology 1. In addition, modern languages and one or more courses in Histology and the Comparative Anatomy of Vertebrates, and a course in the Calculus.

THE MASTER'S DEGREE

The requirements for the Master's degree, if all the work is taken in this Department, are: (1) Research, three majors (course 42 or 43); (2) six majors from the Graduate or Senior College courses; (3) thesis; (4) take part in the Departmental Seminar. The Senior College courses that may be counted toward the Master's degree are 19, 20, 21, 27, 28, 29, 30.

THE DEGREE OF DOCTOR OF PHILOSOPHY

In Physiological Chemistry courses 19, 20, and 27, or their equivalent, and three or four majors in special methods and preparations, are required of all candidates for the Doctor's degree. Knowledge of physical and organic chemistry and of the literature and history of physiological chemistry are also required. Main emphasis is laid, however, upon ability to do original and accurate research work. Candidates must take part in the seminars.

For the degree of Doctor of Philosophy in Pharmacology a thorough knowledge of physiology, physiological chemistry, toxicology, as well as of the history and literature of pharmacology and the completion of original research work, is required. Candidates must take part in the seminars.

REQUIREMENT FOR A MINOR IN PHYSIOLOGICAL CHEMISTRY

For students taking a full minor in Physiological Chemistry three majors will be credited for work equivalent to courses 12, 13, and 14 in Physiology, or other courses in General and Comparative Physiology, taken elsewhere; in addition six majors selected from courses 19, 20, 22, 27, 28, 29, 30, 37, 38, 42, and 43 are required. For students taking a partial minor in Physiological Chemistry the equivalent of three majors' work in Physiology or Physiological Chemistry taken elsewhere will be accepted in partial fulfilment of the requirement; in addition three majors selected from courses 19, 20, 27, 28, 29, 30, 37, 38, 42, or 43.

LABORATORY FEE

A laboratory fee of \$5.00 per major or double minor is charged for each course involving laboratory work. A deposit of \$5.00 per major for breakage is also required of each student taking laboratory work. Any balance remaining will be returned to the student.

A. COURSES OF INSTRUCTION IN PHYSIOLOGICAL CHEMISTRY

I. SENIOR COLLEGE COURSES

19.¹ Physiological Chemistry.—Chemistry of the carbohydrates, lipins, and proteins and the general chemistry of the cell. Lectures, two a week; recitations, one a week; laboratory, 6 hours a week. Prerequisite: General Chemistry, Qualitative Analysis, and Elementary Organic Chemistry. Quantitative Analysis recommended. Mj. Winter and Summer, ASSISTANT PROFESSOR KOCH, DR. SHEAFF, AND MESSRS. LAWRENCE, LANDES, AND GARNER.

20.¹ Physiological Chemistry.—Chemistry of digestion, metabolism, and excretion. Lectures and recitations, three a week; laboratory, 6 hours a week. Prerequisite: course 19. Mj. Autumn and Spring, ASSISTANT PROFESSOR KOCH, DR. SHEAFF, AND MESSRS. LAWRENCE, LANDES, AND GARNER.

II. PRIMARILY FOR GRADUATE STUDENTS

27. Physical-chemical Methods Applied to the Tissues and Liquids of the Body.—Osmotic pressure; hydrogen ion determinations; freezing-points; conductivity; polariscope; etc. Practical work. Prerequisite: Physical Chemistry and quantitative analysis. Mj. or $\frac{1}{2}$ Mj. Autumn, Winter, and Summer, DR. SHEAFF.

28. Quantitative Methods of Urine and Blood Analysis.—Determination of important constituents of the urine and blood. Prerequisite: course 20 or equivalent, and quantitative analysis desired. $\frac{1}{2}$ Mj. or Mj. Spring, ASSISTANT PROFESSOR KOCH.

29. Biochemical Preparations.—Mj. Summer, Autumn, and Winter, ASSISTANT PROFESSOR KOCH.

30. Biochemical Preparations.—Continuation of 29. Mj. Summer, Autumn, and Winter, ASSISTANT PROFESSOR KOCH.

37. Methods of Quantitative Analysis in Physiological Chemistry as Applied to Plant and Animal Tissues.—Prerequisite: quantitative analysis. Mj. Winter and Summer, ASSISTANT PROFESSOR KOCH.

38. Methods of Quantitative Analysis of a Protein.—Prerequisite: quantitative analysis. Mj. Autumn and Winter, ASSISTANT PROFESSOR KOCH.

40. Seminar: History of Physiology and Biochemistry.—A course of readings of historically important works. Mj. Autumn. [Not given in 1919.]

42. Research Work in Physiological Chemistry.—Mj. or DMj. each Quarter, ASSISTANT PROFESSOR KOCH.

45. Seminar in Biochemistry and Pharmacology.—Discussion of important books and papers. Open to graduate and advanced college students. Weekly. $\frac{1}{2}$ Mj. Autumn, ASSISTANT PROFESSOR KOCH; Winter, ASSISTANT PROFESSOR TATUM; Spring, ASSISTANT PROFESSOR KOCH; Summer, ASSISTANT PROFESSOR TATUM.

B. COURSES OF INSTRUCTION IN PHARMACOLOGY

21. Pharmacology.—Lectures and recitations, three hours a week; laboratory, 6 hours a week. Prerequisite: Physiology 12, 13, 14, and Physiological Chemistry 19 and 20. Mj. Winter; repeated, Summer, ASSISTANT PROFESSOR TATUM AND MESSRS. MASON, GROGAN, AND FOLEY.

22. Special Problems in Pharmacology.—Laboratory work of advanced character in special problems in pharmacology. Mj. Spring and Autumn, ASSISTANT PROFESSOR TATUM.

43. Research Work in Pharmacology.—Mj. or DMj. each Quarter, ASSISTANT PROFESSOR TATUM.

¹ Courses 19 and 20 are required of medical students for credit in Physiological Chemistry.

III. DEPARTMENT OF CHEMISTRY, MATERIA MEDICA, AND TOXICOLOGY*†

(INCLUDING MEDICAL PHARMACY, AND COURSES IN THE DEPARTMENT OF CHEMISTRY, AT THE UNIVERSITY)

*Department of Chemistry, Toxicology, Materia Medica, and Medical Pharmacy
at Rush Medical College*

OFFICERS OF INSTRUCTION

AT RUSH MEDICAL COLLEGE

WALTER STANLEY HAINES, A.M., M.D., Professor and Head of the Department;
Professorial Lecturer in the University.

WILLIAM DUNCAN McNALLY, A.B., Associate in Materia Medica and Toxicology.

* For courses in Physiological Chemistry see the Department of Physiology.

† The courses in Physics recommended to undergraduate students preparing to study medicine are the following courses offered in the Department of Physics:

COURSES OF INSTRUCTION IN THE DEPARTMENT OF PHYSICS

[Courses 3S and 4S (or courses 3, 4, and 5) in Physics, or a full equivalent, are required for admission to Rush Medical College; courses 1 and 2 are prerequisite for other courses in Physics. All of these courses are fully described in the *Circular of Information* of the Colleges, University of Chicago, which may be had on application.]

JUNIOR COLLEGE COURSES

1. Elementary Physics.—A first course in the elements of Physics designed primarily for students who do not present entrance Physics. Prerequisite: Algebra and Plane Geometry, one unit each. DM. Summer, First Term, MR. WILLSON; MJ. Autumn, MR. FISCHER.

2. Elementary Physics.—A continuation of the preceding course, covering the subjects of electricity, sound, and light. Prerequisite: course 1. DM. Summer, Second Term, MR. WILLSON; MJ. Winter, MR. FISCHER.

NOTE.—Courses 1 and 2 are limited-credit courses. After a student has credit for 18 majors but less than 27, these courses will be credited at one-half major each; after he has credit for 27 majors they will not be credited at all.

3. Mechanics.—A general college course in mechanics presented mainly from the experimental point of view, but including one demonstration lecture each week. Prerequisite: entrance Physics or course 2. MJ. Autumn, 5 sections, ASSISTANT PROFESSOR LEMON, AND MESSRS. KOPPIUS, McMAHON, AND LAMSON.

4. Electricity.—A general college course in electricity, presented mainly from the experimental point of view, but including one demonstration lecture each week. Prerequisite: course 3. MJ. Winter, 4 sections, ASSISTANT PROFESSOR LEMON, AND MESSRS. KOPPIUS, McMAHON, AND LAMSON.

5. Heat, Sound, and Light.—A general college course in heat, sound, and light, presented mainly from the experimental point of view, but including one demonstration lecture each week. Prerequisite: course 4. MJ. Spring, 4 sections, ASSISTANT PROFESSOR LEMON, AND MESSRS. KOPPIUS, McMAHON, AND LAMSON.

3S. Mechanics, Molecular Physics, and Heat.—A general college course in mechanics, molecular physics, and heat presented from the experimental point of view, not containing demonstration lectures. Prerequisite: entrance Physics or course 2 and Trigonometry. MJ. Summer, 2 sections, PROFESSOR MOORE; Winter, 2 sections, DR. SOUDER AND MESSRS. THOMPSON AND SHELTON.

4S. Electricity, Sound, and Light.—A general college course in electricity, sound, and light presented from the experimental point of view, not containing demonstration lectures. Prerequisite: course 3S or courses 3 and 4. MJ. Summer, 2 sections, DR. HAGENOW; Spring, 2 sections, DR. SOUDER AND MESSRS. THOMPSON, AND SHELTON.

7. Lecture Demonstration Course.—A course of demonstration lectures covering the entire field of Physics, designed to supplement courses 3S and 4S. Especial attention is given to modern points of view; the kinetic theory of heat, the atomic theory of electricity, and the electrical theory of matter receiving especial attention. The attempt is made to repeat a majority of the classical demonstrations of Kelvin, Faraday, Thomson, and others. This course includes the demonstration lectures of courses 3, 4, and 5. Prerequisite: courses 3S and 4S, or their equivalent. MJ. Summer, MR. KOPPIUS.

Department of Chemistry, University of Chicago

OFFICERS OF INSTRUCTION

AT THE UNIVERSITY OF CHICAGO

JULIUS STIEGLITZ, Ph.D., Sc.D., Chem.D., Professor and Chairman of the Department of Chemistry.

WILLIAM DRAPER HARKINS, Ph.D., Professor of Chemistry.

HERMANN IRVING SCHLESINGER, Ph.D., Associate Professor of Chemistry.

ETHEL MARY TERRY, Ph.D., Assistant Professor of Chemistry.

JOHN WILLIAM EDWARD GLATTFELD, Ph.D., Assistant Professor of Chemistry.

GERALD LOUIS WENDT, Ph.D., Assistant Professor of Chemistry. Captain, Chemical Warfare Service, U.S.A.

†LEO FINKELSTEIN, S.B., Instructor in General Chemistry. Lieutenant, Chemical Warfare Service, U.S.A., France.

FRANK L. DE BEUKELAER, A.B., A.M., Instructor in Chemistry.

WILLIS EUGENE GOUWENS, Curator.

MARY MEDA RISING, A.B., Associate in Chemistry.

FREDERICK F. Blicke, S.B., S.M., Research Associate. Lieutenant, Chemical Warfare Service, Washington, D.C.

THOMAS HARRISON LIGGETT, Ph.B., S.M., Assistant in Physical Chemistry.

GEORGE ROSS ROBERTSON, S.B., S.M., Assistant in Organic Chemistry.

WARREN WALTER EWING, S.B., S.M., Assistant in General Chemistry.

AUDREY CHESTER GRUBB, S.B., Assistant in Quantitative Analysis.

IDA KRAUS, S.B., Assistant in Quantitative Analysis (Summer).

LILLIE EICHELBERGER, S.B., S.M., Assistant in Chemistry.

RALPH WALDO GERARD, S.B., S.M., Assistant in Qualitative Analysis.

MARGUERITE WILLCOX, A.B., Assistant in Chemistry.

NICHOLAS D. CHERVIUS, S.B., Assistant in Chemistry.

LEO P. SHERMAN, S.B., Assistant in Chemistry, Summer.

CLARENCE E. BROCKER, S.B., Research Assistant.

MARION G. FRANK, S.B., Lecture Assistant.

CHARLES A. KRAUS, Ph.D., Professor of Chemistry, Clark University (Summer, 1919).

ZONJA WALLEN, S.B., Associate Professor of Chemistry, Mount Holyoke College (Summer, 1919).

FELLOWS, 1919-20

NORVIL BEEMAN, A.B.

HENRY LEON COX, S.B.

FRANK LOUIS DE BEUKELAER, A.M., DuPont Fellow.

CHESTER AUBREY GRUBB, S.B., Hoskins Fellow.

MARTIN CHARLES EDWARD HANKE, S.B.

ROBERT SANDERSON MULLIKEN, S.B., Loewenthal Fellow.

LATHROP EMERSON ROBERTS, S.B., Swift Fellow.

ALBERT J. SALATHE, A.B., A.M.

GERTRUDE WILLIAMS, A.B., Edith Barnard Fellow.

† Absent on leave.

INSTRUCTIONAL WORK

The Department aims to prepare students (1) for government and war service, (2) to teach in colleges or universities, (3) to teach in secondary schools, (4) to fill positions as technical experts or assistants in chemical industries, (5) to become analysts in commercial and sanitary laboratories. The elementary courses may be taken with advantage by students having none of these ends in view.

REQUIREMENTS AND ELECTIVES IN CHEMISTRY

General Organic Chemistry and Qualitative Analysis are now a prerequisite to the medical courses proper. The necessary knowledge of the subject can be obtained from Chemistry 1, 2, 3, 4, and 6, or admission Chemistry and 2S, 3S, 4, and 6.

Organic Chemistry 33 and 34 (2DMs.), Summer Quarter, or Organic Chemistry 30 and 31 (2Mjs.), Autumn and Winter Quarters (see below), may be substituted for course 4.

Students who are preparing for the study of Medicine, and who are candidates for a Bachelor's degree in the University of Chicago, are strongly recommended to take at least one and one-half or two majors more of Chemistry, viz., Quantitative Analysis 8 (1Mj.), or 8M ($\frac{1}{2}$ Mj.), and Physical Chemistry 20.

Candidates for a Bachelor's degree who expect to do research work in Physiology or allied medical subjects may with advantage elect further courses from the following: Organic Chemistry 30, 31, 32; Physical Chemistry 21, 22; Special Methods of Quantitative Analysis 12-19.

LABORATORY FEE

There is a laboratory fee of \$5.00 per major for all courses involving laboratory work in the Department of Chemistry. A deposit of \$5.00 for breakage is also required of each student.

A complete list of the courses of the department will be found in the *Circular* of the Departments of Mathematics, Astronomy, Physics, and Chemistry. The courses listed here are those most likely to have some possible interest to medical students and medical men.

COURSES OF INSTRUCTION

NOTE.—After course 9, the courses are arranged in groups according to subjects: courses 10-19 include courses in Analytical Chemistry, 25-49 in Organic Chemistry, 50-59 in Inorganic Chemistry, 60-74 in Physical Chemistry and Radioactivity; 80-89 are general in nature, and 90-101 are research courses. Nos. 75-79, 30-34, 40-43, and 60S are open to, and suitable for, Senior College students.

I. PRIMARILY FOR THE JUNIOR COLLEGES

1. **Elementary General Chemistry: Inorganic I.**—Prerequisite: preparatory Physics. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week, ASSISTANT PROFESSOR TERRY. Mj. Autumn. Classroom, 3 hours a week; laboratory, 6 hours a week, ASSISTANT PROFESSOR TERRY.

2. **General Chemistry: Inorganic II** (continuation of course 1).—Prerequisite: course 1. DM. Summer, Second Term, ASSISTANT PROFESSOR TERRY. Mj. Winter, ASSISTANT PROFESSOR TERRY.

NOTE.—Course 2, Winter Quarter, is a continuation of course 1, but may be entered by those having credit for admission Chemistry.

¹ Limited-credit course: After a student has credit for 18 majors but less than 27, these courses will be credited at one-half major each; after he has credit for 27 majors they will not be credited at all.

3. General Chemistry: Inorganic III (continuation of course 2). Prerequisite: course 2. Mj. Spring, ———.

NOTE.—Courses 1, 2, and 3 are consecutive courses. Separate credit is given for each, but students are advised not to take one course only. The aim of these courses is to give a definite idea of the fundamental principles of chemistry, and not to overburden the student with a mass of unconnected facts. The conception of chemical equilibrium and the modern theory of solutions are freely used. The lectures will be experimental to a considerable extent. The courses are designed to meet the wants not only of those who wish to go deeper into chemistry, but of all who wish to study the science as part of a liberal education. The lectures and classroom work of 1, 2, and 3 may be taken by graduate students without the laboratory work or laboratory fee.

1C. Introduction to Modern Chemistry.—For non-professional students. Mj. Classroom work, 3 hours a week; laboratory work, 6 hours a week. Spring Quarter. PROFESSOR STIEGLITZ AND ———.

NOTE.—This course is intended for students who do not expect to use chemistry professionally but who wish to obtain a survey of the conceptions of chemistry as the fundamental science of the transformation of matter and of its significance in the life of the nation and in the development of civilization. Students preparing to take chemistry as a profession or in preparation for medicine or for other scientific applications will start with course 1, or, if they have had preparatory Chemistry, with course 2S.

1N. Elements of Chemistry.—Primarily for Student Nurses. Classroom work, 3 hours a week; laboratory work, 4 hours a week. M. First Term, Autumn (1918), ASSOCIATE PROFESSOR SCHLESINGER; Spring (1919), MISS RISING; Autumn, 1919, ———; Spring, 1920, ———.

2S. General Chemistry: Inorganic (first course).—For students who have had preparatory Chemistry. Prerequisite: preparatory Chemistry and preparatory Physics, one unit each. DM. Summer, First Term. Classroom, 6 hours a week; laboratory, 12 hours a week, MR. DE BEUKELAER; Mj. Autumn. Classroom, 3 hours a week; laboratory, 6 hours a week, ASSOCIATE PROFESSOR SCHLESINGER AND ———.

3S. General Chemistry: Inorganic (continuation of course 2S).—DM. Summer, Second Term, MR. DE BEUKELAER; Mj. Winter, ASSOCIATE PROFESSOR SCHLESINGER AND ———.

NOTE.—Whenever, in exceptional cases, the preparation of a student in 2 or 2S justifies it, Qualitative Analysis may be substituted for 3 or 3S.

4. Elementary Organic Chemistry.—Prerequisite: course 3 or 3S. Classroom, 3 hours a week; laboratory, 6 hours a week (subject to change); Mj. Autumn and Spring, ASSISTANT PROFESSOR GLATTFELD.

6. Qualitative Analysis (introductory course).—The lectures deal with the Chemistry of the analytical reactions, and special attention is given to the development and application of the laws of equilibrium and solutions. This course is, in an important sense, one in advanced General Chemistry. Classroom, 2 hours a week; laboratory, 8 or 16 hours a week. Prerequisite: course 3 or 3S. Mj. Summer, ASSOCIATE PROFESSOR WALLEN; Autumn, PROFESSOR STIEGLITZ AND MISS RISING; Winter, MISS RISING; Spring, ———.

7. Qualitative Analysis (continuation of course 6).—Mj. or DM. Summer, ASSOCIATE PROFESSOR WALLEN; Autumn, ASSOCIATE PROFESSOR SCHLESINGER; Winter, ———; Spring, MISS RISING.

NOTE.—Courses 6, 7, and 10 form a continuous course, which may be begun in any quarter. The aim of courses 6, 7, and 10 will be to train the student to do intelligent analytical work, based on a knowledge of the scientific principles of the subject, and to apply and amplify his knowledge of General and Physical Chemistry.

II. PRIMARILY FOR THE SENIOR COLLEGES

8. Quantitative Analysis (introductory course).—Chiefly laboratory work in gravimetric and volumetric analysis. Laboratory, 8 or 16 hours a week; lecture, 1 hour. Prerequisite: course 7. Medical students will be admitted to the course after having taken course 6. Mj. or DM. Summer, Autumn, and Spring, ASSISTANT PROFESSOR WENDT; Winter, MR. ———.

8M. Quantitative Analysis.—A special course for premedical and medical students giving the elements of gravimetric and volumetric analysis. Prerequisite: course 6. Summer, Autumn, and Spring. $\frac{1}{2}$ Mj. ASSISTANT PROFESSOR WENDT; Winter, $\frac{1}{2}$ Mj. Mr. ———.

9. Quantitative Analysis (continuation of course 8).—Mj. or DM. Laboratory, 10 or 20 hours a week. Mj. Summer, Autumn, and Spring, ASSISTANT PROFESSOR WENDT; Winter, Mr. ———.

NOTE.—Courses 8 and 9 form a continuous course which may be begun in any quarter.

10. Advanced Qualitative Analysis (continuation of courses 6 and 7).—Open to Senior College students. Prerequisite: course 7. Mj. or DM. Laboratory, 10 or 20 hours a week. Summer, ASSOCIATE PROFESSOR WALLEN; Autumn, ASSOCIATE PROFESSOR SCHLESINGER; Winter, ASSISTANT PROFESSOR TERRY.

11. Theories and Methods of Quantitative Analysis.— $\frac{1}{2}$ Mj. 2 lectures a week. Prerequisite: course 9. Autumn, ASSISTANT PROFESSOR WENDT.

12–19. Special Methods in Quantitative Analysis.—

- | | |
|--|--------------------------|
| 12. Standard Methods of Water Analysis | $\frac{1}{2}$ Mj. |
| 13. Standard Methods of Food Analysis | $\frac{1}{2}$ Mj. or Mj. |
| 16. Preparation and Analysis of Gases | $\frac{1}{2}$ Mj. |
| 17. Electrolytic Analysis, Gravimetric | $\frac{1}{2}$ Mj. |
| 18. Electrometric Titration | $\frac{1}{2}$ Mj. |

Laboratory work, 10 hours a week per major. Prerequisite: course 9, but for students in Domestic Science and for medical students, course 8. Summer, Autumn, Spring, ASSISTANT PROFESSOR WENDT; Winter, Mr. ———.

15. Organic Elementary Analysis.— $\frac{1}{2}$ Mj. Summer, ASSISTANT PROFESSOR WENDT; Autumn, Winter, and Spring, ———.

20. Elementary Physical Chemistry.—Mj. 3 hours lectures; 6 hours laboratory work. Prerequisite: Quantitative Analysis. Autumn, PROFESSOR HARKINS.

20S. Elementary Physical Chemistry.—Mj. 3 hours lectures; 6 hours laboratory work. Prerequisite: College Physics and Quantitative Analysis. Summer, PROFESSOR HARKINS.

21. Physical Chemistry (continuation of course 20).—Hours as in 20. Prerequisite: course 20 or its equivalent and Physics 3 and 4. Mj. Winter, PROFESSOR HARKINS.

22. Physical Chemistry (continuation of course 21).—Hours as in 20. Prerequisite: course 21 or its equivalent and the elements of calculus. Spring, PROFESSOR HARKINS.

25. Toxicology.— $\frac{1}{2}$ Mj. Autumn, PROFESSOR HAINES AND ASSISTANT.

26. Poisons and Their Detection.—A conference and laboratory course. M. Spring, Second Term, PROFESSOR HAINES.

33. General Organic Chemistry.—Fatty and aromatic series. Lectures, 5 hours a week; laboratory work, 10 hours a week. Prerequisite: course 7. DM. First Term, Summer, ASSISTANT PROFESSOR GLATTFELD.

NOTE.—The lectures of courses 33 and 34 may be taken without the laboratory work and without payment of the laboratory fee by students who have had adequate laboratory work in Organic Chemistry.

34. General Organic Chemistry (continuation of course 33).—Prerequisite: course 33 or 4. DM. Second Term, Summer; same hours as course 33. ASSISTANT PROFESSOR GLATTFELD.

NOTE.—The requirement in Organic Chemistry for premedical students may be met by course 4 or by course 33 and the lectures of 34.

III. PRIMARILY FOR THE GRADUATE SCHOOL

30. Organic Chemistry.—Lectures, 3 hours a week; laboratory, 6 hours a week. Prerequisite: Qualitative Analysis and Elementary Organic Chemistry (course 4 or its equivalent). Mj. Autumn, PROFESSOR STIEGLITZ.

NOTE.—Students who have had adequate laboratory work in Organic Chemistry are admitted to the lectures of course 30, 31, or 32 without payment of a laboratory fee.

31. Organic Chemistry (continuation of course 30).—Lectures, 3 hours a week; laboratory, 4 hours a week. Mj. Winter, PROFESSOR STIEGLITZ.

32. Organic Chemistry (continuation of course 31).—The Aromatic Series. Lectures, 2 hours a week; laboratory work, 6 hours a week. Prerequisite: course 31 (or course 4 for Medical and Home Economics students). Mj. Spring, PROFESSOR STIEGLITZ.

35. Organic Preparations.—Laboratory work, 10 or 20 hours a week. Prerequisite: course 7 and 9, and Organic Chemistry. Mj. or DM. ASSISTANT PROFESSOR GLATTFELD; Mj. Autumn, Winter, Spring, ———.

36. Organic Preparations (continuation of course 35).—Prerequisite: course 35 or its equivalent and a reading knowledge of German or French. Mj. or DM. Summer, ASSISTANT PROFESSOR GLATTFELD; Mj. Autumn, Winter, and Spring, ———.

37. Organic Preparations (continuation of course 36).—Mj. or DM. Summer, ASSISTANT PROFESSOR GLATTFELD; Mj. Autumn, Winter, and Spring, ———.

NOTE.—Students who have taken the laboratory work of courses 30, 31, and 32 or of courses 33 and 34 will omit course 35 and go on with course 36.

42. The Carbohydrates.— $\frac{1}{2}$ Mj. Spring, 1919, ASSISTANT PROFESSOR GLATTFELD.

43. Organic Nitrogen Derivatives.—Uric-acid series, pyridine, quinone-imides, and phenazine compounds; a discussion of the alkaloids, ptomaines, and organic dyestuffs. Prerequisite: course 31. $\frac{1}{2}$ Mj. PROFESSOR STIEGLITZ. [Not given in 1919–20.]

44. Physical Chemistry Applied to Organic Problems.—Lectures, 2 hours a week. Prerequisite: courses 31 and 60, 61, or 62. $\frac{1}{2}$ Mj. PROFESSOR STIEGLITZ. [Not given in 1919–20.]

45A. Selected Topics of Organic Chemistry.—Reversibility; tautomerism; stereoisomerism; organic dyestuffs; application of the electron theory to organic compounds. Prerequisite: Organic Chemistry. PROFESSOR STIEGLITZ. [Not given in 1919–20.]

56A. Some Recent Developments in Chemistry.—Prerequisite: 1Mj. of Physical Chemistry. Lectures 5 times a week. M. First Term, Summer, PROFESSOR KRAUS.

57. The Periodic System and the Interrelations of the Elements.—Lectures. $\frac{1}{2}$ Mj. PROFESSOR HARKINS. [Not given in 1919–20.]

58. The Constitution of Liquids and Solids: Surface Tension and Colloids.—Lectures. $\frac{1}{2}$ Mj. PROFESSOR HARKINS. [Not given in 1919–20.]

59. The Structure of Matter and the Molecular Theory as Applied to Organic Liquids and Solids.—Prerequisite: Physical Chemistry or College Physics, 3 majors. Lectures. $\frac{1}{2}$ Mj. PROFESSOR HARKINS. [Not given in 1919–20.]

63. Physicochemical Measurements.—Electro-Chemistry. Laboratory work, 10 or 20 hours a week. Prerequisite: course 22 or 20S and Physics 5. Mj. or DM. Summer, First Term, PROFESSOR KRAUS; Second Term, Autumn, Winter, and Spring, PROFESSOR HARKINS.

75. Radioactivity and the Subatomic Phenomena.—Lectures. Prerequisite: course 20. $\frac{1}{2}$ Mj. To be given Summer, 1920, ASSISTANT PROFESSOR WENDT.

76. Laboratory Course in Radioactivity.—To accompany or follow course 75. $\frac{1}{2}$ Mj. To be given Summer, 1920, ASSISTANT PROFESSOR WENDT.

79. Photo-Chemistry and Radio-Chemistry.—Prerequisite: course 20. Lectures four hours a week, M. Second Term, Summer. Lectures two hours a week, $\frac{1}{2}$ Mj. Spring, ASSISTANT PROFESSOR WENDT.

85. Chemistry and Preparation of Medicinal Drugs.— $\frac{1}{2}$ Mj. Spring, PROFESSOR HAINES.

85. The Chemistry of Medicinal Drugs.—A course dealing with the physical and chemical properties of the chief medicinal drugs and their most important remedial preparations. 3 hours per week. $\frac{1}{2}$ Mj. Spring, Tu., Th., F., 4:00, PROFESSOR HAINES.

AT RUSH MEDICAL COLLEGE

51. Toxicology.—An advanced conference and laboratory course dealing with the physical and chemical properties of the more important poisons, their effects and treatment, and their detection. Conferences and laboratory: 60 hours. .8Mj. Hours to be arranged. PROFESSOR HAINES.

52. Clinical Chemistry.—A lecture, conference, and laboratory course dealing with the urine, gastric contents, and other animal fluids, in their relation to disease, and embracing the composition of these fluids, the chemical and microscopical detection of abnormal constituents, and the interpretation of their clinical significance. Lectures, conferences, and laboratory: Tu., 11:00; Th., F., 11:00–12:00. 60 hours. .8Mj. PROFESSOR HAINES. [Not given in 1919–20.]

Course 52 may be counted as a part of the five and one-half required majors in Medicine.

53. Materia Medica, Medical Pharmacy, and Toxicology.—A lecture and conference course dealing with the physical, chemical, and pharmaceutical properties of medicinal agents and their toxicology. Lectures and conferences: Autumn, lectures, Tu., W., F., Sat., 11:00–12:00; Spring, Tu., W., F., Sat., 11:00. 48 hours. .8Mj. PROFESSOR HAINES AND ASSOCIATE PROFESSOR FANTUS.

53A. Materia Medica and Medical Pharmacy.—A laboratory course supplementary to course 53. Autumn, Tu., F., 9:00–11:00; Spring, Tu., F., 9:00–11:00. 48 hours. .4Mj. PROFESSOR HAINES AND MR. McNALLY.

V. DEPARTMENT OF THERAPEUTICS AND PREVENTIVE MEDICINE

OFFICERS OF INSTRUCTION

THEODORE TIEKEN, M.D., *Ingals* Professor* and Head of the Department of Therapeutics.

BERNARD FANTUS, A.M., M.D., Associate Professor of Therapeutics.

RALPH WALDO WEBSTER, M.D., Ph.D., Assistant Professor of Pharmacological Therapeutics.

ROBERT JAMES GAY, M.D., DANIEL ROBERTS BROWER, M.D., Instructors.

CHARLES OTTO CARLSTROM, G.D., Assistant in Kinesitherapy.

INTRODUCTORY

The course in Hygiene and Sanitation is given to the Senior class and consists of lectures and conferences.

A course in the principles of Therapeutics is given to the Junior class three times a week throughout the Winter Quarter by means of lectures and conferences. One of these hours is devoted chiefly to instruction in prescription-writing from a therapeutic standpoint. The work is continued during the Spring Quarter by means of a conference course with more special reference to individual diseases.

A course in Practical Therapeutics is offered in which the student is personally taught manipulative methods, including Massage, Electricity, Hydrotherapy, etc., and the practical care of the sick.

* The *Ingals* Professorship of Therapeutics was founded in 1898 by the late Dr. Ephraim Ingals, by a gift to the college of \$25,000 for the promotion of higher education and the advancement of medical science. Dr. Ingals was professor of *materia medica* and medical jurisprudence in Rush Medical College from 1859 to 1871, and was a member of the Board of Trustees and treasurer of the College for many years.

It is intended that this Department shall supplement the work of the Department of Medicine by dealing more in detail with the technique of treatment.

Any course in Clinical Medicine dealing specifically with Therapeutics, for example, course 23 in the Department of Medicine, may be applied on the required credit in Materia Medica and Therapeutics.

COURSES OF INSTRUCTION

I. JUNIOR YEAR

1. Therapeutics.—A lecture and prescription-writing course. Prerequisite: Materia Medica III, course 53. Lectures: M., F., 8:00; prescription-writing: W., 8:00. .6Mj. Winter, ASSOCIATE PROFESSOR FANTUS.

2. Therapeutics.—A conference course on the therapeutic management of special diseases, including prescription-writing. Prerequisite: Materia Medica III, course 53. .6Mj. Summer and Spring, M., W., F., 8:00, ASSOCIATE PROFESSOR FANTUS.

3. Practical Therapeutics.—A laboratory and practical course in massage, hydrotherapy, aërotherapy, electrotherapy, cooking for the sick, and the general management of the sick, with clinical application. Given to the class in sections. Tu., Th., 4:00–6:00. .4Mj. Autumn and Winter, DR. BROWER AND ASSISTANTS.

II. SENIOR YEAR

5. Preventive Medicine, Hygiene, and Sanitation.—A lecture and conference course in public health and sanitation, including a study of municipal water, milk, and food supply, housing, etc. .4Mj. Autumn, Tu., Th., 8:00, DR. GAY.

7. Kinesitherapy.—A practical course in Kinesitherapy, with demonstrations, including massage, Swedish movements, and Frenkel re-educative exercises, the students themselves having an opportunity to practice these forms of treatment on patients sent from the other departments of the dispensary. Hours to be announced. .6Mj. Autumn, Winter, and Spring, MR. CARLSTROM.

VI. THE DEPARTMENT OF PATHOLOGY

OFFICERS OF INSTRUCTION

LUDVIG HEKTOEN, M.D., Sc.D., Professor and Head of the Department of Pathology.

HARRY GIDEON WELLS, A.M., Ph.D., M.D., Professor of Pathology.

HARRIET FAY HOLMES, A.B., Special Instructor in Pathological Technique.

GEORGE THOMAS CALDWELL, A.M., Ph.D., Instructor in Pathology.

JANET ANDERSON, S.B., Laboratory Assistant in Pathology.

———, Research Assistant in Pathology.

LYDIA M. DEWITT, A.M., M.D., Assistant
Professor of Pathology

KARL KONRAD KOESSLER, M.D., Assistant
Professor of Experimental Medicine

MAUD SLYE, A.B.

JULIAN HERMAN LEWIS, A.M., Ph.D., M.D.

MILTON THEODORE HANKE, S.B., Ph.D.

MORRIS KHARASCH, S.B.

Members of the Otho S. A. Sprague
Memorial Institute Staff.

FELLOW, 1919–20

ELIZABETH PAULINE WOLF, S.B.

AT RUSH MEDICAL COLLEGE

LUDVIG HEKTOEN, M.D., Sc.D., Professor and Head of the Department of Pathology.

EDWIN RAYMOND LECOUNT, M.D., Professor of Pathology.

GEORGE HOWITT WEAVER, M.D., Professor of Pathology.

GEORGE FREDERICK DICK, M.D., Assistant Professor of Pathology.

RICHARD FISSON AUSTIN, M.D., Instructor in Pathology; Pathologist, Children's Memorial Hospital.

HOMER KING NICOLL, A.B., M.D., Instructor in Pathology and Serologist, Presbyterian Hospital.

BURRELL OTTO RAULSTON, M.D., Assistant in Pathology; Resident Pathologist, Presbyterian Hospital.

CELESTIN B. SEMERAK, M.D., Assistant in Pathology.

WILLIAM GEORGE HIBBS, S.B., Fellow in Pathology.

INTRODUCTORY

The courses offered by the Department include the required work in Pathology in the curriculum of the first two years in the study of Medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and for those wishing to qualify themselves for research.

For each major or double-minor course requiring laboratory work the laboratory fee is \$5.00.

THE MASTER'S DEGREE

For the Master's degree a dissertation and eight majors of graduate or Senior College work in Pathology are required, if all the work is in Pathology. Substitution of courses in Bacteriology and Immunity may be made with the approval of the Head of the Department, but courses 1, 2, 3, and at least 3 majors of Research must be taken in Pathology.

Students wishing to take a minor in Pathology will meet the same requirements as for the Master's degree, except that a dissertation is not required.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Courses required of all candidates are Pathology 1, 2, and at least 3 majors in course 3; also Bacteriology 2, and a course covering the fundamental principles and methods of Immunology. Courses in Hygiene and Bacteriology may be accepted as equivalent to courses in Pathology to a maximum of 5 majors with the approval of the Head of the Department. A dissertation must be presented representing the results of original research under the direction of an officer of the Department, but so conducted as to indicate the ability of the candidate to conduct independent original investigation.

COURSES OF INSTRUCTION

I. SENIOR COLLEGE COURSES

1. General Pathology and Pathological Histology.—A practical laboratory course in general pathologic histology, supplemented by experiment, by the study of fresh and museum specimens, and by recitations in general pathology. Prerequisite: Histology, Bacteriology, Physiology, Physiological Chemistry, and Visceral Anatomy. Laboratory, recitations, and lectures: 9 hours a week. Mj. Autumn, DR. CALDWELL; Winter, PROFESSOR WELLS, DR. CALDWELL, AND ASSISTANTS.

2. Pathology of Infectious Granulomas and Tumors.—Mj. Spring, PROFESSOR WELLS, DR. CALDWELL, AND ASSISTANTS.

1 and 2 will be given as double-minor courses in the First and Second Terms of the Summer Quarter. Daily 8:00–11:00, DR. CALDWELL AND ASSISTANTS.

5. Special Pathology.—Supplementary to and paralleling course 2. A study of the pathological changes affecting different organs and tissues. Limited to 30 students. Mj. Spring, DR. CALDWELL AND ASSISTANTS.

II. GRADUATE COURSES

3. Advanced Pathology.—Open to a limited number of students who have credit in general pathology. Laboratory work will be given in pathological technique, the study and recording of autopsies, and special pathological material. Laboratory fee, \$5.00. Hours to be arranged for each student. Mj. Autumn, Winter, and Spring, PROFESSOR WELLS.

4. Research in Pathology.—Open to a limited number of qualified students and graduates in medicine. Laboratory fee, \$5.00 per Mj. Hours to be arranged for each student. Mj. or DMj. each Quarter, PROFESSORS HEKTOEN AND WELLS.

8. Pathological Technique.—Open to a limited number of students. Mj. Autumn, MISS HOLMES.

III. JUNIOR AND SENIOR COURSES (WEST SIDE)

12. Special Pathologic Anatomy and Histology.—Limited to thirty-six students. Practical instruction is given in the methods of making postmortem examinations and of recording the results. The student studies and describes the gross and microscopic appearance of diseased organs and tissue. Bacteriologic and chemical methods and experiments are employed whenever indicated and the clinical relations (pathologic physiology) of the morbid conditions are emphasized. *Prerequisite:* courses *Pathology 1 and 2*, and at least one quarter of clinical work. Daily 2:00–4:00, and autopsies. 144 hours. 1.2Mjs. Summer, Autumn, Winter, and Spring, PROFESSOR LECOUNT AND ASSISTANT PROFESSOR DICK.

13. The Histology and Diagnosis of Tumors.—*Prerequisite:* courses *Pathology 1 and 2*. 8:00–10:00. 72 hours. Mj. Autumn, PROFESSOR LECOUNT.

14. Infection and Immunity.—A lecture course. Winter, First Term, Tu., Th., 8:00. 12 hours. .2Mj. PROFESSOR HEKTOEN.

17. Advanced Laboratory Work and Research in Pathology.—Open to a limited number of specially qualified students and graduates in medicine. Hours arranged for each student. Credit given based on time and quality of work. Throughout the year. PROFESSORS HEKTOEN AND LECOUNT.

VIA. THE DEPARTMENT OF HYGIENE AND BACTERIOLOGY

OFFICERS OF INSTRUCTION

EDWIN OAKES JORDAN, PH.D., Professor of Bacteriology and Chairman of the Department of Hygiene and Bacteriology.

†NORMAN MACLEOD HARRIS, M.B., Assistant Professor of Bacteriology. Captain, Canadian Army Medical Corps.

JOHN FOOTE NORTON, PH.D., Assistant Professor of Bacteriology.

PAUL ROBERTS CANNON, A.B., Instructor in Bacteriology.

† Absent on leave.

JOHN EVERETT GORDON, S.B., Instructor in Bacteriology.

HARRY MONTGOMERY WEETER, S.M., Assistant in Bacteriology.

FREDERICK WILLIAM MULSOW, Ph.D., Assistant in Bacteriology.

DUDLEY BILLINGS REED, A.B., M.D., Associate Professor of Physical Culture;
Health Officer of the University.

WILLIAM THOMAS BELFIELD, M.D., Professor of Surgery, Rush Medical College.
HARRY JOHN CORPER, Ph.D., Director of Laboratories of the Municipal Tuberculosis Sanitarium.

ALICE HAMILTON, M.D., Investigator of Occupational Diseases, U.S. Bureau of Labor Statistics.

HENRY FREDERICK HELMHOLZ, M.D., Assistant Professor of Medicine, Rush Medical College.

FELLOWS, 1919-20

CORNELIA MITCHELL DOWNS, A.B. IVAN C. HALL, S.M., Logan Fellow.

UNDERGRADUATE SEQUENCES

I. PRINCIPAL SEQUENCE

The principal sequence consists of nine majors from the courses offered by the Department. The sequence must be arranged in consultation with the Head of the Department.

II. SECONDARY SEQUENCE

To students wishing to take a minor in this Department, six majors from the following courses are recommended: 1, General Bacteriology; 2A, Pathogenic Bacteria; 3, Public Hygiene; 4, Industrial Hygiene; 5, Public-Health Problems; 10, Sanitary Aspects of Food Supply (or 11, Water and Water Supply, or 12, Public-Health Laboratory Methods); 15, Advanced Bacteriology (2 or 2½ Mjs.).

For the Master's degree a dissertation and six majors of graduate work in this Department are required. The majors must be selected with the approval of the Head of the Department.

COURSES OF INSTRUCTION

I. JUNIOR COLLEGE COURSES

100. Personal Hygiene.—The elements of normal growth, functions, toleration limits, physical diagnosis, prodromes of disease conditions, and the essentials of personal health maintenance and of corrective therapeutics. For non-medical students. Lectures and demonstrations. ½Mj. Autumn, ASSOCIATE PROFESSOR REED; Summer, DR. CLAPP.

1N. Bacteriology, Hygiene, and Pathology.—For Student Nurses. See special announcement for student nurses. Laboratory fee, \$5.00. Mj. Autumn and Spring, DR. MULSOW.

II. SENIOR COLLEGE COURSES

1. General Bacteriology.—Lectures on the fundamental facts of bacteriology, including brief discussions of the industrial and hygienic applications of bacteriology. Yeasts and molds and several groups of bacteria are studied in the laboratory. Designed for general scientific students. Prerequisite: Chemistry 1, 2, and 3 (or 2S and 3S), and Zoölogy 1 or equivalent. Laboratory fee, \$5.00. Mj. Autumn and Summer, ASSISTANT PROFESSOR NORTON; Spring, MR. CANNON.

2A. The Pathogenic Bacteria.—To be taken in sequence to 1 (see description of 2B). Medical credit will be given either for 1 and 2A, or for 2B. Laboratory fee, \$5.00. Mj. Winter, ASSISTANT PROFESSOR NORTON.

2B. The Pathogenic Bacteria.—Lectures deal with the morphology and biology of bacteria in general and with infection, immunity, and the specific infectious diseases. In the laboratory, students make up bacteriologic media, study some of the more important groups of non-pathogenic and pathogenic bacteria, keep daily records of the biologic changes in cultures under observation, examine water, sewage, milk, pus, saliva, etc., conduct post-mortems on infected animals, and isolate and identify bacteria in mixtures. Those who are not students of medicine will be admitted to this course only by permission of the instructor. Laboratory fee, \$7.50. 1½Mjs. Summer. DR. MULSOW; Autumn, MESSRS. CANNON AND GORDON; Spring, ASSISTANT PROFESSOR NORTON AND MR. GORDON.

3. Public Hygiene.—The applications of bacteriology to municipal hygiene, water supply, food supply, etc. Prerequisite: Chemistry 1, 2, and 3 (or 2S and 3S); Zoölogy 1. M. Summer, ASSISTANT PROFESSOR NORTON; ½Mj. Winter, PROFESSOR JORDAN.

4. Industrial Hygiene.—Course covers dangerous trades, industrial health hazards, occupational diseases, with their control, prevention, and social aspects. For medical students; also sociological students who have had some preparation in the fundamental sciences. Prerequisite: course 3. ½Mj. Winter, DR. HAMILTON.

5. Public-Health Problems.—Infant welfare, the anti-tuberculosis campaign, venereal diseases. Prerequisite: course 2A or 2B or 3. ½Mj. Spring, PROFESSOR BELFIELD, ASSISTANT PROFESSOR HELMHOLZ, AND DR. CORPER.

6. Military Hygiene. A course of lectures on the hygiene of military camps and of armies in the field. ½Mj. Winter, MR. CANNON.

III. GRADUATE COURSES

10. Sanitary Aspects of Food Supply.—Lectures and conferences on the bacteriology of foods, including milk, butter, eggs, canned foods, etc.; on food preservation; and particularly on the hygienic aspects of food. Laboratory work includes practical examinations and studies of food micro-organisms. Prerequisites: course 1 or 2B, Chemistry 8 (or 8M). Laboratory fee, \$5.00. Mj. Spring, MR. WEETER.

11. Water and Water Supply.—Sources of supply and methods of purification. Chemical, bacterial, and microscopical methods. Lectures and laboratory work. Prerequisite: Chemistry 8 (or 8M); course 1 or 2B. With permission of the instructor this course may be taken by qualified students as a minor in the Second Term. Laboratory fee, \$5.00. Mj. Winter, DR. MULSOW.

12. Public-Health Laboratory Methods.—Diagnosis of diphtheria, typhoid fever, and rabies; Wassermann test, etc. Prerequisite: course 2A or 2B. Laboratory fee, \$5.00. Mj. Summer and Winter, MESSRS. CANNON AND GORDON.

13. Parasitology.—Animal parasites of man (including protozoa). Prerequisite: course 1 or 2A or 2B. Class is limited to 10. Laboratory fee, \$5.00. Mj. [Not given in 1919.]

14. Immunity in Relation to Preventive Medicine.—The use of sera, anti-toxins, and the like in treating disease; also the use of antibodies, such as agglutinins and opsonins, in the diagnosis of diseased conditions. Prerequisite: course 2A or 2B. Mj. [Not given in 1919-20.]

15. Advanced Bacteriology.—Open to a limited number of specially prepared students and to graduates in medicine. Prerequisite: course 2A or 2B; Chemistry 8 or 8M. Laboratory fee, \$5.00. Mj. Repeated each Quarter, PROFESSOR JORDAN AND PROFESSOR NORTON.

16. Vital Statistics and Epidemiology.—Prerequisite: course 2A or 2B or 3. $\frac{1}{2}$ Mj. Spring, PROFESSOR JORDAN.

17. School Hygiene.—This course considers the more important problems relating to the individual school child and his environment. It includes discussions of posture, neuro-muscular co-ordinations, physical defects, and some phases of personal hygiene. The heating, lighting, ventilation of schoolhouses, and other facts of the common school life are also taken up. Consideration is given to the questions of school programs, school recreations, communicable diseases, and first aid. A good high-school course in physiology will be accepted for admission to this course. Mj. Winter (at College of Education), ASSOCIATE PROFESSOR REED.

20. Research in Bacteriology.—Laboratory fee, \$5.00 per Mj. Mj. or DMj. each Quarter, PROFESSOR JORDAN.

VII. DEPARTMENT OF MEDICINE

OFFICERS OF INSTRUCTION

INTERNAL MEDICINE

FRANK BILLINGS, Sc.D. (Harv.), M.D., Professor and Head of the Department of Medicine.

NORMAN BRIDGE, A.M., M.D., Emeritus Professor of Medicine.

JAMES BRYAN HERRICK, A.M., M.D.; BERTRAM WELTON SIPPY, M.D.; JOSEPH LEGGETT MILLER, M.D.; SAMUEL ROBERT SLAYMAKER, M.D.; JOSEPH ALMARIN CAPPS, M.D., Professors of Medicine.

BIRD MCPHERSON LINNELL, M.D.; WILBER E. POST, M.D.; ERNEST EDWARD IRONS, M.D., Ph.D., Associate Professors of Medicine.

LUDWIG MANHEIMER LOEB, M.D.; JAMES MURRAY WASHBURN, M.D.; MILTON MOSES PORTIS, M.D.; ALEXANDER FRANCIS STEPHENSON, M.D.; ROLLIN TURNER WOODYATT, M.D.; JOHN RITTER, M.D.; LEON BLOCH, M.D.; ELLIS KIRK KERR, M.D.; SIDNEY STRAUSS, M.D.; KARL K. KOESSLER, M.D.; WALTER WILE HAMBURGER, M.D.; ARCHIBALD HOYNE, M.D.; RALPH C. BROWN, M.D.; WILLARD WOODARD DICKER, M.D.; JOHN L. JACQUE, M.D., Assistant Professors of Medicine.

HARRY E. MOCK, M.D., Assistant Professor of Medicine (Industrial).

RALPH WALDO WEBSTER, M.D., Ph.D.; ARTHUR A. SMALL, M.D.; JAMES RICHARD GREER, M.D.; JOHN HANCOCK MCCLELLAN, M.D.; DONALD P. ABBOTT, M.D.; JOHN J. ALDERSON, M.D.; RUSSELL M. WILDER, M.D.; FREDERICK WILLIAM GAARDE, M.D.; HARRY G. HARDT, M.D.; ASHER F. SIPPY, M.D., Instructors in Medicine.

FREDERICK OLAF FREDERICKSON, M.D.; HENRY WILLIAM ABELMAN, M.D.; SIGISMUND FRANKLIN WATERMAN, M.D.; GEORGE HOWELL COLEMAN, M.D.; ROBERT S. BERGHOFF, M.D.; CLAUDE ALLEN LINK, M.D.; CLIFFORD PORTER MCCULLOUGH, M.D.; FRED M. SMITH, M.D.; LINN F. MCBRIDE, M.D.; CARROLL O. GETTY, M.D.; WILLIAM D. SANSUM, M.D.; FRANCIS AMOS CHAPMAN, M.D., Associates in Medicine.

HENRY J. ULLMAN, M.D.; LEE CONNELL GATEWOOD, M.D.; MAX BENJAMIN LEVITON, M.D.; ABRAHAM RIMMERMAN, M.D.; JOHN D. ELLIS, M.D.; NATHAN S. DAVIS, III, M.D.; JOHN FAVILL, M.D.; LOWELL DELFORD SNORF, M.D.; CHARLES M. BACON, M.D.; HYMAN COHAN, M.D.; LEO L. HARDT, M.D.; WILLIAM A. THOMAS, M.D.; FRED M. DRENNAN, M.D.; EVA FRAZER, M.D.; YALE N. LEVINSON, M.D.; ISADORE RABENS, M.D.; MAURICE J. SHERMAN, M.D.; JOHN J. STOLL, M.D.; NORTON R. YEAGER, M.D., Assistants in Medicine.

—, *Dane Billings Memorial Fellow in Medicine.*

PEDIATRICS

JOHN MILTON DODSON, A.M., M.D., Professor of Medicine (Pediatrics).
SAMUEL AMBERG, M.D., Associate Professor of Experimental Medicine.
SAMUEL JOHNSON WALKER, M.D.; HENRY F. HELMHOLZ, M.D.; FRANK WESLEY ALLIN, M.D.; CLIFFORD G. GRULEE, A.M., M.D., LL.D., Assistant Professors of Medicine (Pediatrics).
GUSTAV LEONARD KAUFFMAN, M.D.; AUGUST STRAUCH, M.D.; WALTER H. O. HOFFMANN, M.D.; WALTER FRITZ WINHOLT, M.D., Instructors in Medicine (Pediatrics).
GEORGE EDWIN BAXTER, M.D.; CECIL THEODORE HEIDEL, M.D.; OSCAR ELLIS CHASE, M.D., Associates in Medicine (Pediatrics).
CHARLES SCHOTT, M.D.; HENRY H. KLEINPELL, M.D.; LORIN C. COLLINS, M.D.; SIGURD KRAFT, M.D.; ARTHUR HARLEY PARMELEE, M.D.; VICTORIA C. A. BERGSTROM, M.D.; MILDRED JESSIE ROBERTS, M.D.; CHARLES K. STULIK, M.D., Assistants in Medicine (Pediatrics).

NERVOUS AND MENTAL DISEASES

THOR ROTHSTEIN, M.D., Professor of Medicine (Nervous and Mental Diseases).
SIDNEY KUH, M.D.; JAMES CORNELIUS GILL, M.D.; GEORGE WASHINGTON HALL, A.M., M.D.; PETER BASSOE, M.D., Associate Professors of Medicine (Nervous and Mental Diseases).
JOSEPHINE ESTABROOK YOUNG, M.D., Assistant Professor of Medicine (Nervous and Mental Diseases).
WILLIAM FREDERICK DEY, M.D., Instructor in Medicine (Nervous and Mental Diseases).
MAURICE BRAUDE, M.D., Associate in Medicine (Nervous and Mental Diseases).
EDWIN T. SECOR, M.D.; SAMUEL NYE CLARK, M.D.; ISIDORE LEON MYERS, M.D., Assistants in Medicine (Nervous and Mental Diseases).

INTRODUCTORY

In this Department instruction is given in the topics usually comprised under the terms Internal Medicine, Pediatrics, and Neurology. The abundant clinical material in the Central Free Dispensary, the Presbyterian, Anna Durand, the Children's Memorial, Cook County, and other hospitals makes it possible to give instruction largely by object-lessons—the actual study of disease in the living

patient by students arranged in small groups. In the Junior or first clinical year an effort is made to give the student a survey of the general field, with training in the technique of physical examination, laboratory methods, and in history-taking. To this end the student takes, in the Junior year, work in the following courses: VII-0, Practice of Medicine; VII-1, Principles of Pediatrics; VII-2, Physical Examination; VII-5, Laboratory Diagnosis; and work in the dispensary, and arena clinics in courses 6, 8, 9, 9A, 10, 11, and 13. In the Senior year opportunity is afforded for more advanced clinical work in the section clinics in the Cook County Hospital, VII-3, 3A, etc., in the ward clinics in the Presbyterian Hospital, VII-6A, and in the several clinical courses in Internal Medicine, Pediatrics, and Neurology and Psychiatry. The courses specifically required of each student are courses VII-0, 1, 2, 5; and 6, or 6A, or 1.2Mjs. taken from courses 3 to 3P. In addition thereto, he must elect courses of his choice to make a total of 5.5Mjs. Attention is called also to the conference courses, offered in the Senior year, giving a general review of the clinical subjects (see p. 84).

COURSES OF INSTRUCTION

INTERNAL MEDICINE

JUNIOR YEAR

0. Practice of Medicine.—A conference and recitation course on the essentials of the practice of medicine, designed to afford a general survey of the more important diseases and conditions in preparation for the clinical courses. Limited to 30 students in each section. 36 hours. M., W., F., 8:00. .6Mj. Autumn and Spring, PROFESSOR SLAYMAKER, ASSISTANT PROFESSORS WASHBURN AND DICKER, AND DRs. GREER, McCLELLAN, AND COLEMAN.

2. Physical Examination.—A conference and practical course on the methods of physical exploration, chiefly of the normal body. Tu., Th., Sat., 8:00. 36 hours. .3Mj. Autumn and Spring, PROFESSOR TIEKEN, ASSOCIATE PROFESSOR GILL, ASSISTANT PROFESSOR DICKER, AND DRs. GREER, COLEMAN, DRENNAN, AND OTHERS.

5. Laboratory Diagnosis.—A laboratory course in the chemical, microscopic, and bacteriologic examination of blood, urine, sputum, gastric contents, feces, secretions, exudates, etc., and their pathologic and clinical significance, especial attention being given to the acquisition of an accurate technique. Each class limited to 36 students. Autumn and Spring, each Term: sec. a, M., W., Th.; sec. b; Tu., F., Sat., 9:00–11:00. 36 hours. .3Mj. DRs. NICOLL, McBRIDE, AND RAULSTON.

6. A Clinical Course.—In the Central Free Dispensary each Quarter. In the departments of Internal Medicine, of Pediatrics, and of Nervous and Mental Diseases, conducted by members of the Department. Prerequisite: Physical and Laboratory Diagnosis. In sections, one quarter for each section. Daily, 9:00–11:00. 144 hours. 1.2Mjs.

SENIOR YEAR

3. Clinic and Conference at the Cook County Hospital.—Topics: Winter: Infectious Diseases; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Th., 9:00–11:00; M., 9:00. 36 hours. .4Mj. PROFESSOR SLAYMAKER.

3A. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases; Winter: Respiratory Diseases; Spring: Constitutional Diseases. Limited to 10 students. W., 2:00–4:00; M., 3:00–4:00. 36 hours. .4Mj. PROFESSOR MILLER.

3B. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases; Winter: Respiratory Diseases; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Tu., 2:00–4:00; Th., 3:00–4:00. 36 hours. .4Mj. PROFESSOR CAPPS.

3C. Clinic and Conference Course at the Cook County Hospital.—Topics: Spring: Diseases of the Alimentary Tract and Liver. Limited to 10 students. M., 9:00–11:00; Th., 9:00. 36 hours. .4Mj. PROFESSOR TIEKEN. [Not given in 1919–20.]

3E. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Respiratory Diseases; Winter: Diseases of the Alimentary Tract and Liver; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Tu., 9:00–11:00; F., 9:00. 36 hours. .4Mj. ASSISTANT PROFESSOR PORTIS.

3F. Clinic and Conference Courses at the Cook County Hospital.—Topics: Autumn: Constitutional Diseases; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Tu., 11:00; F., 11:00–1:00. 36 hours. .4Mj. ASSISTANT PROFESSOR LOEB.

3G. Clinic and Conference Course at the Cook County Hospital.—Topics: Winter: Respiratory Diseases; Spring: Infectious Diseases. Limited to 10 students. Tu., 9:00–11:00; F., 9:00. 36 hours. .4Mj. ASSOCIATE PROFESSOR IRONS.

3H. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer: Diseases of the Heart and Blood Vessels; Autumn: Diseases of the Alimentary Tract and Liver; Winter: Infectious Diseases and Diseases of the Blood; Spring: Constitutional Diseases. Limited to 10 students. Sat., 9:00; W., 9:00–11:00. 36 hours. .4Mj. ASSISTANT PROFESSOR BLOCH.

3J. Clinic and Conference Course at the Cook County Hospital.—Topics: Winter: Diseases of the Heart and Blood Vessels; Spring: Diseases of the Heart and Blood Vessels. Limited to 10 students. Tu., F., 11:00–1:00. 36 hours. .4Mj. ASSISTANT PROFESSOR KERR.

3K. Clinic and Conference Course at the Cook County Hospital.—Topics: Autumn: Infectious Diseases and Immunity; Winter: Diseases of the Heart and Blood Vessels; Spring: Nephritis and Allied Conditions. Limited to 10 students. W., Sat., 9:00–11:00. 36 hours. .4Mj. ASSISTANT PROFESSOR KOESSLER.

3L. Clinic and Conference Course at the Cook County Hospital.—Autumn: Diseases of the Alimentary Tract and Liver. Limited to 10 students. Winter: Diseases of the Heart and Kidney. W., Sat., 11:00–1:00. 36 hours. .4Mj. ASSISTANT PROFESSOR HAMBURGER.

3M. Clinic and Conference Course at the Cook County Hospital.—Topics: Summer: Diseases of the Heart and Blood Vessels; Winter: Infectious Diseases; Spring: Respiratory Diseases. M., Th., 9:00–11:00. 48 hours. .4Mj. DR. _____.

VII-3N.—A clinical ward course in the medical wards of the Cook County Hospital, with special reference to cardiovascular conditions. The student will serve as a clinical clerk to the men offering the course and assist in the daily routine of the study and care of the patients assigned to them. Limited to 2 students. Summer, 8:00–1:00. Daily. Total hours, 30 per week. 2Mjs. ASSISTANT PROFESSORS KERR AND LOEB.

VII-3P.—A clinic and conference course at the Cook County Hospital. Topic: The Contagious Diseases. Limited to 15 students. Autumn, Winter, and Spring, W., Sat., 11:00–1:00. 48 hours. .4Mj. ASSISTANT PROFESSOR HOYNE.

3X. Clinic and Conference Course at the Central Free Dispensary.—Topic: Diagnostic Methods. Autumn, Winter, and Spring. M., Th., 9:00–11:00. 48 hours. .4Mj. DR. GREER.

***6A. Clinical Course in the Presbyterian Hospital.**—Senior students will be assigned each Quarter to the medical services in the Presbyterian Hospital and to the service in diseases of children and the Durand Hospital of the Memorial Institute for Contagious Diseases, for a period of one quarter, to serve daily as clinical clerks and laboratory assistants. Each student so assigned will serve in the clinical laboratory of the hospital and in the wards from 8:00–11:00 daily. Approximately 200 hours. 1.6Mjs. ASSISTANT PROFESSOR DICK AND DR. SHAFER.

JUNIOR OR SENIOR YEAR

8. Clinical Medicine.—A clinical and conference course in general medicine, with special reference to Diagnosis. M., Th., 9:00–11:00. 48 hours. .4Mj. Summer, ASSOCIATE PROFESSOR POST.

9. Clinical Medicine.—Clinical and conference course in Infectious Diseases and Diseases of the Respiratory Tract, with special reference to Applied Therapeutics. M., Th., 9:00–11:00. 48 hours. Prerequisite: courses Materia Medica 53 and 53A. .4Mj. Autumn, ASSOCIATE PROFESSOR POST.

9A. Clinical Medicine.—A clinical and conference course in Diseases of the Kidney, with special reference to Applied Therapeutics. M., Th., 9:00–11:00. 48 hours. .4Mj. Winter, ASSOCIATE PROFESSOR POST.

10. Clinical Medicine.—A clinical and conference course in Diseases of the Blood and Ductless Glands. M., Th., 9:00–11:00. 48 hours. .4Mj. Spring, ASSISTANT PROFESSOR WASHBURN.

11. Clinical Medicine.—A clinical and conference course in medicine. Tu., F., 9:00–11:00. Each course 48 hours. .4Mj.

Summer: Infectious Diseases and Immunity. DR. GREER.

Autumn: Diseases of the Heart and Blood Vessels. PROFESSOR HERRICK.

Winter: Infectious Diseases and Diseases of the Respiratory Tract. PROFESSOR TIEKEN.

Spring: The Disorders of Metabolism. DRs. GREER AND SANSUM.

11A. A clinical and demonstration course in Diseases of the Heart and Blood Vessels, including Electro-Cardiography. Limited to 8 students. Tu., F., 9:00–11:00. Each course 48 hours. .4Mj. Mj. Summer and Winter, DR. FRED M. SMITH.

13. Clinical Medicine.—A clinical and conference course in medicine. W., Sat., 9:00–11:00. Each course 48 hours. .4Mj.

Summer: Tuberculosis in its various aspects, pulmonary, glandular, abdominal, etc., and covering diagnosis, therapy, hygienic principles, and sociology. ASSISTANT PROFESSOR RITTER AND DR. HENRY G. HARDT.

Autumn: Diseases of the Alimentary Tract and Ductless Glands. PROFESSOR SIPPY.

Winter: Diseases of the Alimentary Tract and Ductless Glands. PROFESSOR SIPPY.

Spring: Diseases of the Heart and Kidney. ASSISTANT PROFESSOR RALPH C. BROWN.

23. Therapeutic Clinic.—A medical clinic at the Cook County Hospital, with special reference to Therapeutics. Prerequisite: course III-53. Each quarter, W., 7:00–9:00 P.M. 24 hours. .2Mj. PROFESSOR TIEKEN.

SENIOR YEAR

27. Industrial Medicine and Surgery.—A clinical and conference course dealing with the Human Maintenance Department in the Industries, including preventive medicine, etc. For details see special bulletin. Limited to 10 students. Tu. and F., 7:30–9:30 P.M. 48 hours. .4Mj. DRs. MOCK, ALICE HAMILTON, AND ELLIS.

* Each student is required to purchase or rent for this course a microscope, and to purchase a hemocytometer and a Talquist scale or some other hemoglobinometer.

28. Medical Tuberculosis.—A clinical and conference course in the medical, and especially in the sociologic, measures, for the prophylactic and curative treatment of tuberculosis. W., Sat., 9:00–11:00. .4 to .6Mj. ASSISTANT PROFESSOR RITTER AND ASSISTANTS. [Not given in 1919–20.]

33. Variola (extra-mural).—A clinical course in variola, at the Chicago Isolation Hospital, at intervals as material is afforded. Classes limited to 10 each. .2M. ASSOCIATE CLINICAL PROFESSOR HEMAN SPALDING OR ASSISTANT PROFESSOR HOYNE.

36. Clinical Diagnosis Course.—Advanced work in Clinical Diagnosis, etc. Limited to 4 students. W., 9:00–11:00. 24 hours. .3Mj. Each Quarter, by arrangement in advance, ASSOCIATE PROFESSOR LINNELL.

PEDIATRICS

1. The Principles of Pediatrics.—A conference and practical course comprising the anatomy, physiology, and hygiene of infancy and childhood, the dietetics of infancy and the communicable diseases. Prerequisite to every other course in pediatrics. Limited to 30 students. Tu., F., 8:00. 24 hours. .4Mj. Summer, DR. PARMELEE; Autumn, ASSISTANT PROFESSOR GRULEE; Winter, DR. HEIDEL; Spring, PROFESSOR DODSON AND DR. WINHOLT.

1A.—Supplemental to course 1. A conference and demonstration course on the diseases of the new-born, and the peculiar features of disease as manifested in infancy and childhood. Prerequisite: course 1. M., Th., 8:00. 24 hours. .4Mj. Summer, DR. STRAUCH; Autumn, DR. HOFFMANN; Spring, ASSISTANT PROFESSOR GRULEE.

6. Dispensary Clinic.—See p. 71; one-fourth of the time allotted to this course is devoted to Pediatrics.

6A. Medical Ward Clinic.—See p. 72; one-third of the time allotted to this course is devoted to Pediatrics and the contagious diseases.

12. Pediatric Clinic.—A clinical course in the Presbyterian Hospital and in Senn Hall. Prerequisite: course 1. Limited to 10 students. Tu., F., 9:00–11:00. 48 hours. .4Mj. Topics: Summer: Diseases of the Alimentary Tract, DR. HOFFMANN; Winter: The Diseases of the Nervous System in Infancy and Childhood, PROFESSOR DODSON AND ASSISTANT PROFESSOR ALLIN.

16. Post-Natal Clinic.—A clinical and follow-up course in the care of normal infants. This course affords an opportunity for the student to become familiar with the infant-welfare movement. Limited to 20 students. Tu., F., 9:00–11:00. 48 hours. .4Mj. Summer, DR. GRULEE; Autumn, DR. HOFFMANN; Winter, DR. CHASE; Spring, DR. PARMELEE.

16A. Post-Natal Clinic (extra-mural).—A clinical and conference course in the case of normal infants at some of the infant-welfare stations, affording opportunity for the student to become familiar with the practical side of infant feeding and the care of children. Limited to 6 students. Hours to be arranged. DR. HOFFMANN.

16B. The Feeding and Care of Older Children.—A clinical and conference course. Limited to 10 students. Sat. 9:00–11:00. .2Mj. Autumn, DR. STRAUCH; Winter, ASSISTANT PROFESSOR GRULEE.

18. Pediatric Clinic.—A clinic and conference course at the Presbyterian Hospital. Prerequisite: course 1. W., Sat., 9:00–11:00. .4Mj. Topics: Autumn: Diseases of the New-born and the Dietetics of Infancy; Spring: The Commoner Diseases of Infancy, including rickets, scurvy, congenital syphilis, tuberculosis, etc., ASSISTANT PROFESSOR GRULEE.

18A. Pediatric Clinic at the Cook County Hospital.—A clinic and conference course at the Cook County Hospital. Limited to 10 students. Each Quarter, excepting the Autumn, F., 7:00–9:00. 24 hours. .2Mj. DR. STRAUCH.

20. Pediatric Clinic at the Cook County Hospital.—A clinical course in the diseases of children, with especial reference to tuberculosis. Limited to 10 students. M., Th., 4:00-6:00. 4Mj. Autumn, DR. MAY MICHAEL.

FOR PRACTITIONERS

Clinical Courses at the Children's Memorial Hospital.—Courses are offered, for practitioners only, at the Children's Memorial Hospital. Detailed description of these courses will be furnished on application to Rush Medical College.

NERVOUS AND MENTAL DISEASES

3D. Diseases of the Nervous System.—A clinical and conference course at the Cook County Hospital. Limited to 10 students. M., Th., 9:00-11:00. 48 hours. 4Mj. Spring, ASSOCIATE PROFESSOR HALL.

19. Psychology as Related to Psychiatry.—A lecture, demonstration, and conference course in psychology as an introduction to clinical psychiatry. Tu., Th., 8:00-9:00. 24 hours. 4Mj. Spring, ASSOCIATE PROFESSOR KUH.

19A. Pathology of the Nervous System.—A demonstration, clinical, and conference course, including discussion of symptoms depending upon various pathologic changes in the nervous system. Prerequisite: one clinical course in Nervous Diseases. Tu., Th., 8:00. 24 hours. 4Mj. Spring, PROFESSOR ROTHSTEIN.

21. Diseases of the Nervous System.—A clinical course in the amphitheater of Senn Hall and at the Cook County Hospital. Limited to 40 students. M., Th., 9:00-11:00. 48 hours. 4Mj. Summer, ASSOCIATE PROFESSORS GILL AND BASSOE.

21F. Diseases of the Nervous System.—Similar to course 21. Limited to 40 students. 4Mj. Autumn, ASSOCIATE PROFESSORS HALL AND BASSOE.

21W. Diseases of the Nervous System.—Similar to course 21. Limited to 40 students. 4Mj. Winter, PROFESSOR ROTHSTEIN AND ASSOCIATE PROFESSOR GILL.

21S. Diseases of the Nervous System.—Similar to course 21. Limited to 40 students. 4Mj. Spring, PROFESSOR ROTHSTEIN AND ASSOCIATE PROFESSORS GILL AND BASSOE.

22. Psychiatry.—A clinical and conference course at the Cook County Hospital. Topic: Insanity. Conference: M., 4:00-6:00; Th., 4:00-5:00. 36 hours. 4Mj. Autumn and Winter, ASSOCIATE PROFESSOR KUH.

VIII. DEPARTMENT OF SURGERY

OFFICERS OF INSTRUCTION

ARTHUR DEAN BEVAN, M.D., *Nicholas Senn Professor** and Head of the Department of Surgery.

WILLIAM THOMAS BELFIELD, M.D., Professor of Surgery (Genito-urinary).

DEAN DEWITT LEWIS, S.B., M.D., Professor of Surgery.

EDWIN WARNER RYERSON, M.D., Associate Professor of Surgery (Orthopedic).

CARL BRADEN DAVIS, M.D.; DALLAS BALDWIN PHEMISTER, M.D.; PAUL OLIVER, M.D.; GEORGE GILBERT DAVIS, M.D.; VICTOR LUPU SCHRAGER, M.D., Assistant Professors of Surgery.

CHARLES AUBREY PARKER, M.D., Assistant Professor of Surgery (Orthopedic).

* The *Nicholas Senn* Professorship was founded in 1898 by the late Professor Nicholas Senn, with a gift to the college of \$25,000 for the promotion of higher medical education and the advancement of medical science. He was professor of the principles of surgery in Rush Medical College from 1889 to 1891 and professor of surgery from 1891 to 1908.

- FREDERICK BROWN MOOREHEAD, M.D., D.D.S., Assistant Professor of Surgery (Oral and Dental).
- ISABELLA HERB, M.D., Assistant Professor of Surgery (Anesthetics).
- ROBERT HARRY HERBST, M.D.; HERMAN LOUIS KRETSCHMER, M.D., Assistant Professors of Surgery (Genito-urinary).
- EVARTS AMBROSE GRAHAM, M.D.; VERNON CYRENIUS DAVID, M.D.; EDWARD JAMES LEWIS, M.D.; ROGER THROOP VAUGHAN, M.D.; BENJAMIN FRANKLIN DAVIS, M.D., Ph.D.; WALTER HOWARD MEENTS, M.D.; GATEWOOD, M.D.; ALBERT HERR MONTGOMERY, M.D.; FRANKLIN B. McCARTY, M.D.; EDWIN MORTON MILLER, M.D.; GOLDER L. McWHORTER, M.D., Ph.D., Instructors in Surgery.
- HOLLIS E. POTTER, M.D., Lecturer in Radiology.
- JOHN ALFRED GRAHAM, M.D.; DAVID C. STRAUSS, M.D.; CHARLES MERRILL ROSE, M.D.; LEE FESTUS WATSON, M.D.; EDWARD WALTER WESTLAND, M.D.; FREDERICK CHRISTOPHER, M.D., Assistants in Surgery.
- THOMAS P. LYNAM, M.D.; ROBERT O. RITTER, M.D.; HARRISON WILLIS MALTBY, M.D.; JACOB MYERS, M.D., Assistants in Surgery (Orthopedic).
- THEODORE DROSDOWITZ, M.D.; ALVIN THOMPSON, M.D.; FREDERIC A. BISDOM, M.D.; LOUIS D. SMITH, M.D.; JOHN PAUL ASHWORTH, M.D.; THOMAS COTTRELL, M.D.; WALTER THOMAS VENN, M.D., Assistants in Surgery (Genito-urinary).
- FRANCES E. HAINES, M.D., Assistant in Anesthetics.
- CASSIE BELL ROSE, M.D., Assistant in Surgery (Radiology).
- EDWIN M. MILLER, M.D., *Nicholas Senn* Fellow in Surgery.
- GATEWOOD, M.D., *Thompson-Bevan* Fellow in Surgery; House Surgeon, Presbyterian Hospital.
- , *Francis A. Hardy* Fellow in Surgery; Assistant House Surgeon, Presbyterian Hospital.

EXTRA-MURAL INSTRUCTORS

- DANIEL N. EISENDRATH, M.D., Clinical Professor of Surgery, Cook County Hospital.
- WALLACE BLANCHARD, M.D., Assistant Clinical Professor of Surgery (Orthopedic), Home for Destitute Crippled Children.
- COLEMAN GRAVES BUFORD, M.D., Assistant Clinical Professor of Surgery, Children's Memorial Hospital.
- PAUL F. MORF, M.D., Assistant Clinical Professor of Surgery, Cook County Hospital.
- ✓ HUGH McKENNA, M.D., Assistant Clinical Professor of Surgery, Cook County Hospital.

INTRODUCTORY

A total of 5½ majors in surgery is required. The following subjects are prerequisite to other courses and to final examination: Surgical Anatomy and Operative Surgery on the Cadaver, .6; Principles of Surgery and Surgical Pathology, 1; Clinic and Conference Courses, including one course on each of the divisions of Regional Surgery: (a) Head, Neck, and Thorax; (b) Abdomen; (c) Extremities, 1.2; Genito-urinary, .4; Orthopedic, .4; Surgical Dispensary,

.4; Operative Surgery on Animals, .3; Presbyterian Hospital Ward Work, .4; anesthetics, .1; An optional .8 major, elected as the student desires, and devoted either to laboratory or to clinical work, is recommended.

COURSES OF INSTRUCTION

I. JUNIOR YEAR

1. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., W., Th., 4:00. 36 hours. .5Mj. Autumn and Spring, ASSISTANT PROFESSORS SCHRAGER AND MORF, AND DRs. LEWIS, MEENTS, MILLER, AND McCARTY.

2. Principles of Surgery and Surgical Pathology.—A conference and laboratory course. M., W., Th., 4:00. 36 hours. .5Mj. Winter and Summer, ASSISTANT PROFESSORS SCHRAGER AND MORF, AND DRs. LEWIS, MEENTS, MILLER, AND McCARTY.

3. Surgical Anatomy and Operative Surgery on the Cadaver.—A demonstration and operative course. Sec. *a*, M., Th., 11:00–1:00; sec. *b*, Tu., F., 11:00–1:00. 48 hours. .6Mj. Winter and Spring, ASSISTANT PROFESSORS GEORGE G. DAVIS AND PHEMISTER, AND DRs. BENJAMIN F. DAVIS, DAVID, McWHORTER, AND McCARTY.

5. Clinical Surgery (Central Free Dispensary).—Including bandaging, surgical dressings, and surgical appliances. Daily, 11:00–1:00. 48 hours. .4Mj. Each Quarter throughout the year. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat. Each section limited to 10 students. ASSISTANT PROFESSORS GEORGE G. DAVIS AND PHEMISTER, AND DRs. DAVID, STRAUSS, B. F. DAVIS, MEENTS, MONTGOMERY, McCARTY, GATEWOOD, VAUGHAN, MILLER, ROSE, WATSON, AND WESTLAND.

This course may be elected by Junior students after one quarter's residence in the clinical years during which other courses in surgery have been taken.

14. Orthopedic Surgery.—A clinical course at the Home for Crippled Children, 1653 Park Avenue, Summer, Autumn, Winter, and Spring. 48 hours. .4Mj. Sec. *a*, M., Th., 2:00–4:00, ASSOCIATE PROFESSOR RYERSON AND DR. MYERS; sec. *b*, Tu., F., 2:00–4:00, ASSISTANT PROFESSOR BLANCHARD AND DR. MALTBY; sec. *c*, W., Sat., 2:00–4:00, ASSISTANT PROFESSOR PARKER.

II. JUNIOR AND SENIOR YEARS

6. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the abdomen. This course includes instruction in the administration of anesthetics. 11:00–1:00, M. and Th., Tu. and F., 48, 60, or 96 hours. .4, .6, or .8Mj. Autumn, PROFESSOR BEVAN, PROFESSOR LEWIS, ASSISTANT PROFESSORS DAVIS, KRETSCHMER, GEORGE G. DAVIS, AND PHEMISTER, AND DRs. DAVID, B. F. DAVIS, AND GATEWOOD.

8. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in the surgery of the head, neck, and thorax. This course includes instruction in the administration of anesthetics. M. and Th., Tu. and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Winter, PROFESSOR BEVAN, PROFESSOR LEWIS, ASSISTANT PROFESSORS C. B. DAVIS, GEORGE G. DAVIS, PHEMISTER, AND MOOREHEAD, AND DRs. DAVID, B. F. DAVIS, AND GATEWOOD.

10. Clinical Surgery.—A clinical and conference course in general surgery, with special reference to and examination in surgery of the extremities. This course includes instruction in the administration of anesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Spring, PROFESSOR BEVAN, PROFESSORS LEWIS AND RYERSON, ASSISTANT PROFESSORS C. B. DAVIS, GEORGE G. DAVIS, AND PHEMISTER, AND DRs. DAVID, B. F. DAVIS, AND GATEWOOD.

12. Clinical Surgery.—A clinical and conference course in general surgery. This course includes instruction in the administration of anesthetics. M., Tu., Th., and F., 11:00–1:00. 48, 60, or 96 hours. .4, .6, or .8Mj. Summer, PROFESSOR BEVAN, PROFESSOR LEWIS, ASSISTANT PROFESSORS C. B. DAVIS, GEORGE G. DAVIS, AND PHEMISTER, AND DRs. DAVID, B. F. DAVIS, AND GATEWOOD.

Laboratory and research work in surgical pathology may be elected by a limited number of students in the laboratories of Professor Bevan, and credit in proportion to the character and length of course may be granted, but not to exceed in any one quarter .4Mj.

12A. Clinical Course in the Presbyterian Hospital.—Thirty students will be assigned to the clinical services in the hospital. Each Quarter. 48 hours. .4Mj. Sec. a, M. and Th.; sec. b, Tu. and F.; sec. c, W. and Sat.

16. A Practical Course in Operative Surgery on Animals.—Given to the class in sections. Limited to 32 students. Sec. a, Tu. and F., 11:00–1:00; First Term, sec. b, Tu. and F., Second Term, 11:00–1:00. 24 hours. .2Mj. Summer and Autumn, ASSISTANT PROFESSORS GEORGE G. DAVIS AND PHEMISTER, AND DRs. DAVID, BENJAMIN F. DAVIS, MILLER, LEWIS, MCCARTY, AND MCWHORTER.

17. Genito-urinary Diseases (Central Free Dispensary).—A clinical and conference course in diseases of the genito-urinary tract. Sec. a, M., Th.; sec. b, Tu., F.; sec. c, W., Sat., 4:00–6:00. 48 hours. .4Mj. Summer, Autumn, Winter, and Spring, PROFESSOR BELFIELD, ASSISTANT PROFESSORS HERBST AND KRETSCHMER, AND DRs. DROSDOWITZ, THOMPSON, BIsDOM, ASHWORTH, COTTRELL, AND VENN.

18. Clinical Course at the Cook County Hospital.—Class limited to 10 students. Tu., 11:00–1:00. 24 hours. .2Mj. Each Quarter, ASSISTANT PROFESSOR SCHRAGER.

19. Clinical Course at the Cook County Hospital.—Class limited to 10 students. F., 2:00–4:00. 24 hours. .2Mj., Autumn, Winter, Spring, ASSISTANT PROFESSOR HUGH MCKENNA.

20. Clinical Course at the Cook County Hospital.—Class limited to 10 students. F., 11:00–1:00. 24 hours. .2Mj. Each Quarter, ASSISTANT PROFESSOR OLIVER.

21. Clinical Course at the Cook County Hospital.—W., 2:00–4:00. 24 hours. .2Mj. Each Quarter, CLINICAL PROFESSOR EISENDRATH.

22. Clinical Course at the Cook County Hospital.—Class limited to 20 students. Tu., 7:00–9:00. 24 hours. .2Mj. Autumn, Winter, and Spring, CLINICAL PROFESSOR EISENDRATH OR DR. VAUGHAN.

23. Clinical Course at the Cook County Hospital.—Class limited to 10 students. Tu. 2:00–4:00. 24 hours. .2Mj. Each Quarter. ASSISTANT PROFESSOR MORF.

24. Clinical Course at the Cook County Hospital.—Class limited to 20 students. W., 7:00–9:00 P.M. 24 hours. .2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR OLIVER.

25. Orthopedic Clinic at the Cook County Hospital.—Clinical course, with special reference to the orthopedic affections of adults. Mon., 2:00–4:00. 24 hours. .2Mj. Each Quarter, ASSISTANT PROFESSOR PARKER.

30. Anesthetics.—A conference and demonstration course on the administration of anesthetics. Sat., 2:00. .1Mj. Autumn and Spring, First Term, ASSISTANT PROFESSOR HERB.

33. Roentgenology.—A conference and demonstration course on the use of the X-ray in diagnosis and treatment, and on the general principles of radiographic technique. Limited to 15 students. W. and Sat., 2:00. .2Mj. Autumn and Winter, Second Term, DRs. HOLLIS E. POTTER AND ROSE.

34. Oral and Dental Surgery.—A conference and clinical course on the surgery of the mouth and teeth. Sat., 2:00. .2Mj. Spring, ASSISTANT PROFESSOR MOOREHEAD.

III. POSTGRADUATE

29. Operative Surgery for Postgraduates.—On dogs, surgery of the abdomen. On the cadaver, surgery of the head, neck, thorax, and extremities. Four weeks, beginning July 1 and August 1. M., W., F., 4:00–6:00. Other days or months by special arrangement. Four or 8 men. Fee, \$50.00. ASSISTANT PROFESSORS GEORGE G. DAVIS AND PHEMISTER, AND DRs. BENJAMIN F. DAVIS AND McWHORTER.

IX. DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

OFFICERS OF INSTRUCTION

JOHN CLARENCE WEBSTER, M.D., F.R.C.P. (Edin.), Professor and Head of the Department of Obstetrics and Gynecology.

RUDOLPH WIESER HOLMES, M.D., Associate Professor of Obstetrics and Gynecology.

ALBERT BELCHAM KEYES, M.D.; CAREY CULBERTSON, M.D.; W. GEORGE LEE, M.D.; NOBLE SPROAT HEANEY, M.D., Assistant Professors of Obstetrics and Gynecology.

JOSEPH L. BAER, M.D.; FRANZ HEINRICH HARMS, M.D.; MARY M. S. JOHNSTONE, M.D.; WILLIAM FRANCIS HEWITT, S.B., M.D., Instructors in Obstetrics and Gynecology.

FREDERICK WILLIAM ROHR, M.D., Associate in Obstetrics and Gynecology.

PAUL C. FOX, M.D.; MARIE MABEL MATHIES, M.D., Assistants in Obstetrics and Gynecology.

INTRODUCTORY

The subjects of Obstetrics and Gynecology are taught in the Junior and Senior years in laboratory, recitation, and conference courses, in Dispensary and Hospital clinics, and in the conduct of labor in the homes of patients. The total requirement is 3 majors, at least 2 majors of which must be taken in obstetric courses.

COURSES OF INSTRUCTION

OBSTETRICS

I. JUNIOR YEAR

1. Conference Course.—Anatomy and physiology of pregnancy, bacteriology of genital tract, diagnosis of uterine pregnancy, multiple gestation, hygiene and management of pregnancy, clinical phenomena of normal labor. Tu., F., 4:00–5:00. .4Mj. Autumn and Spring, DR. HEWITT.

2. Conference Course.—Anatomy and physiology of normal labor, conduct and management of labor, asepsis in obstetrics, anatomy and physiology of puerperium, management of puerperal state, ectopic gestation, toxemia of pregnancy, eclampsia, premature expulsion of ovum, diseases of ovum. Pre-requisite: course 1. Tu., F., 4:00–5:00. .4Mj. Winter, DR. BAER.

3A. Obstetric Operations and Manipulations.—A clinic and conference course in Obstetrics at the Cook County Hospital. Tu., F., 2:00–4:00. 48 hours. .4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR LEE.

4. Obstetric Operations and Manipulations.—A lecture and conference course. Occipito-posterior, face, brow, pelvic, transverse presentations, prolapse of cord, arms, legs, anomalies of the bony pelvis, artificial interruption of pregnancy, version, forceps, symphysiotomy, pubiotomy, embryotomy, Caesarian section. Prerequisite: courses 1 and 2. Tu., Th., 5:00. 24 hours. .4Mj. Spring, DR. HOLMES.

II. JUNIOR OR SENIOR YEAR

4A. Operative Obstetrics.—Manipulations on the manikin. Supplemental to course 4. Prerequisite: course 4. Limited to 10 students. 22 hours. .2Mj. Second Term, Spring; each Term of Summer, Autumn, and Winter. Sec. a, Tu., F., 11:00–1:00; sec. b, W., Sat., 11:00–1:00, DRs. BAER, HARMS, HEWITT, or DR. ROHR.

III. SENIOR YEAR

3. Conference Course.—Pathology of pregnancy (continued), pathology of labor, anomalies of expellant powers and soft passages, placenta praevia, ablatio placentae, hemorrhage during third stage, postpartum hemorrhage, retained placenta, adherent placenta, rupture of uterus, inversion of uterus, pathology of the puerperium. Prerequisite: courses 1 and 2. Tu., F., 5:00. .4Mj. Autumn, ASSISTANT PROFESSOR HEANEY.

5. Clinical Obstetrics.—In the maternity department of the Presbyterian Hospital, St. Luke's Hospital, Chicago Lying-in Dispensary, and Central Free Dispensary. Attendance upon cases of confinement in various hospitals and at the homes of patients is required of each student before graduation. Each student will be summoned to cases at the time of delivery and will attend the patients during and after delivery under supervision. Clinical records must be kept by students and certificates obtained. Prerequisite: courses 1, 2, 4, and 4A. .4Mj. Throughout the year. PROFESSOR WEBSTER, ASSISTANT PROFESSOR HEANEY, AND DRs. HARMS, HEWITT, AND ROHR. Nurses: EDNA H. McCULLOUGH AND MARY A. COAL.

GYNECOLOGY

I. JUNIOR YEAR

7. Conference Course in Gynecology.—Anatomy of the pelvic floor; puberty, menstruation; case-taking and physical examination; minor therapeutic measures. M., Th., 5:00–6:00. .4Mj. Autumn and Spring, ASSISTANT PROFESSOR HEANEY AND CULBERTSON.

II. JUNIOR AND SENIOR YEARS

6. Laboratory and Demonstration Course.—A gross and microscopic study of the female genitalia, both normal and pathologic, including the changes found in menstruation and in pregnancy. Limited to 12 students. Each Quarter, W., Sat., 11:00–1:00. 48 hours. .4Mj. ASSISTANT PROFESSOR CULBERTSON AND DRs. HARMS, ROHR, AND FOX.

8. Dispensary Clinics.—Conferences in practical gynecology. Prerequisite: course 6 or 7. Limited to 5 in each section. 24 hours. .4M. Each Term throughout the year. Sec. a, M., Th., 11:00–1:00; sec. b, Tu., F., 11:00–1:00; sec. c, W., Sat., 11:00–1:00.

III. SENIOR YEAR

9. College Clinics.—In Gynecology and Obstetrics. Prerequisite: course 6 or 7. 48 hours. .4Mj. Each Quarter throughout the year. W., Sat., 11:00–1:00. PROFESSOR WEBSTER AND ASSISTANT PROFESSOR HEANEY.

10. Clinical Course at the Cook County Hospital.—A clinical course in Gynecology. Limited to 10 students. Tu., F., 11:00–1:00. 24 hours. .4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR CULBERTSON.

11. Special Laboratory Work.—For a limited number of students selected by the Department staff.

X. DEPARTMENT OF LARYNGOLOGY AND OTOTOLOGY

OFFICERS OF INSTRUCTION

JOHN EDWIN RHODES, A.M., M.D.; GEORGE ELMER SHAMBAUGH, Ph.B., M.D., Professors of Laryngology and Otology.

GEORGE ABRAHAM TORRISON, A.B., M.D.; ELMER LAWTON KENYON, A.B., M.D.; STANTON ABELES FRIEDBERG, M.D.; DAVID FISKE, M.D.; THOMAS WILLIAMS LEWIS, S.B., M.D.; GEORGE WILLIAM BOOT, M.D.; ROBERT SONNENSCHNEIN, M.D., Assistant Professors of Laryngology and Otology.

DANIEL BERNARD HAYDEN, M.D.; HENRY H. EVERETT, M.D.; HENRY PATTERSON BAGLEY, M.D.; JOHN CHARLES WILLIAMS, M.D.; EDWIN MCGINNIS, A.B., M.D., Instructors in Laryngology and Otology.

STEPHEN HRYNIEWIECKI, M.D.; SPENCER C. DICKERSON, M.D.; J. H. GREGORY, M.D.; F. F. THOMPSON, M.D., Assistants in Laryngology and Otology.

HENRY BOETTCHER, M.D., Instructor (extra-mural) in Laryngology and Otology.

INTRODUCTORY

COURSES

Every physician before beginning the practice of medicine should have a working knowledge of the whole field, and should be equipped to diagnose the more common diseases generally included in the specialties, and to apply judicious early treatment. These courses are, therefore, designed, not for specialists, but to furnish students a knowledge of those special diseases with which they must have to do in general practice.

A total of 1.2Mjs. is required in this Department, but it is recommended that more be taken if time permits. Credit will not be allowed for a course repeated until all of the required work in the Department has been completed. Courses 1 and 2 are prerequisite for the clinical courses. Students will be allowed to register for courses 1 and 2 in the Summer Quarter. Students who have taken course 1 in the Spring Quarter will be allowed to register for courses 2 and 3 in the Summer Quarter.

COURSES FOR PRACTITIONERS

Physicians desirous of gaining a better knowledge of the work in the special fields of Laryngology and Otology may register for any of the courses in the Department. Opportunity is offered for the study of the special anatomy and physiology of these subjects as well as for clinical study. Courses 6, 7, 8 are suited for this purpose.

COURSES OF INSTRUCTION

1. Rhinology, Laryngology, and Otology.—Introductory lecture and conference course. Prerequisite for the clinical courses. Lectures: M., Th., 4:00. .4Mj. Spring (for Juniors), ASSISTANT PROFESSORS FISKE AND BOOT; Autumn (for Seniors), ASSISTANT PROFESSOR SONNENSCHNEIN AND DR. HAYDEN. One hour will be devoted to the defects of speech by ASSISTANT PROFESSOR KENYON.

***2. Nose, Throat, and Ear.**—Clinical and practical courses in the Dispensary in the technique of examination in the objective study of the normal and the commoner pathological conditions of the nose, throat, and ear; also intubation of the larynx. Sections limited to 10 students. Prerequisite for the succeeding

* Each student is required to provide himself with a head mirror.

clinical courses. 2:00-4:00 each clinic day. 48 hours. .4Mj. Summer, Autumn, Winter, and Spring; sec. *a*, M., Th., Drs. HAYDEN AND BAGLEY; sec. *b*, Tu., F., ASSISTANT PROFESSOR TORRISON AND DR. MCGINNIS; sec. *c*, W., Sat., ASSISTANT PROFESSOR LEWIS AND Drs. WILLIAMS AND EVERETT.

*2F. **Nose, Throat, and Ear.**—Clinical and practical course at the Cook County Hospital. Similar to course 2. Prerequisite: course 1. Limited to 10 students. M., Th., 2:00-4:00. 48 hours. .4Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSORS FRIEDBERG, BOOT, AND SONNENSCHNEIN.

3A. **Clinical Course: Diseases of the Nose and Throat.**—Prerequisite: courses 1 and 2. Students who have taken course 1 in the Spring Quarter will be allowed to register for courses 2 and 3 in the Summer. Wed., 2:00-4:00. 24 hours. .2Mj. Summer, ASSISTANT PROFESSOR LEWIS; Autumn and Winter, ASSISTANT PROFESSOR FRIEDBERG AND DR. MCGINNIS; Spring, ASSISTANT PROFESSOR TORRISON. One clinic period each Quarter will be devoted to bronchoscopy and esophagoscopy by ASSISTANT PROFESSOR FRIEDBERG and one period to defects of speech by ASSISTANT PROFESSOR KENYON.

3B. **Clinical Course: Diseases of the Ear.**—Prerequisite: courses 1 and 2. Students who have taken course 1 in the Spring Quarter will be allowed to register for courses 2 and 3 in the Summer. M., Th., 2:00-3:00. 24 hours. .2Mj. Summer, Autumn, Winter, and Spring, PROFESSOR SHAMBAUGH AND ASSISTANT PROFESSORS FISKE AND BOOT.

4. **Clinical Course (extra-mural).**—Diseases of the Ear: Illinois Charitable Eye and Ear Infirmary. A clinical course, limited to 10 students. Prerequisite: courses 1 and 2. Autumn and Spring. F., 2:00-4:00. 24 hours. .2Mj. DR. HENRY F. BOETTCHER. Students should register at the same time for course XI-4.

6. **Student Assistants in the Dispensary.**—One student for each section, from either the Junior or Senior class, may register each Quarter for work as an assistant in the Dispensary. Sec. *a*, M., Th.; sec. *b*, Tu., F.; sec. *c*, W., Sat., 2:00-4:00. 48 hours. .4Mj.

7. **Surgical Anatomy of the Ear.**—A course for advanced students and practitioners. Class limited to 6 students. 12 hours. .2Mj. Autumn, W., 3:00-4:00, DR. HAYDEN; Winter, Tu., 3:00-4:00, ASSISTANT PROFESSOR BOOT.

8. **Surgical Anatomy, Physiology, and Pathology of the Nose and Throat.**—A course for advanced students and practitioners. Class limited to 6 students. M., 4:00-5:00. 12 hours. .2Mj. Summer and Winter, ASSISTANT PROFESSOR SONNENSCHNEIN.

10. **Defects of Speech.**—A lecture and clinical course offered to graduate students and to Seniors who have completed 1.2Mjs. of work in the Department. From the standpoint of the anatomy and physiology of speech production the important disorders of speech are considered, including defects of articulation, stammering, the aphonias, organic and functional, the difficulties of public speakers and singers, etc. 8 to 12 hours. .1Mj. Summer, ASSISTANT PROFESSOR KENYON.

XI. DEPARTMENT OF OPHTHALMOLOGY

OFFICERS OF INSTRUCTION

WILLIAM HAMLIN WILDER, M.D., Professor and Head of the Department of Ophthalmology.

JOHN BERNARD ELLIS, M.D.; FRANCIS LANE, M.D.; CHARLES GILCHRIST DARLING, M.D.; WILLIAM GEORGE REEDER, M.D., Assistant Professors of Ophthalmology.

* Each student is required to provide himself with a head mirror,

ALBERT MARVIN HALL, M.D.; GEORGIANA DVORAK THEOBALD, M.D., Associates in Ophthalmology.

EARLE B. FOWLER, M.D.; THOMAS DYER ALLEN, M.D.; DANIEL W. EISS, M.D.; EDWIN M. NEHER, M.D., Assistants in Ophthalmology.

INTRODUCTORY

UNDERGRADUATE COURSES

A total of .8 major in Ophthalmology is required for graduation.

The work in this Department is arranged so that the student first gets a general survey of the subject through lecture and recitation courses.

In the same quarter, or the following one, through the courses in "practical ophthalmology" he is taught the methods of examination of the eye by various tests, the necessary manipulations for treatment, and the use of the ophthalmoscope by practical exercises on schematic and living eyes. For this work each student must provide himself with an ophthalmoscope.

All this is *preliminary* and *prerequisite* to the clinical courses, in which the student is given the privilege of examining the cases, of studying the progress of the diseases and the effect of the treatment from day to day, and also of witnessing the technic of the operations on the eye. These clinics are on the conference plan, and each exhibition of cases is followed by a discussion on the etiology, pathology, symptomatology, and treatment of the diseases under observation.

Practical courses in refraction are offered for undergraduates and also for practitioners of medicine, in which the methods of fitting glasses are taught.

Special courses for small classes on the normal and morbid anatomy, histology, and bacteriology of the eye are made particularly instructive by the exhibition of anatomical preparations and microscopic slides.

COURSES OF INSTRUCTION

1. Diseases of the Eye.—A lecture and recitation course. 24 hours. .4Mj. Summer (Seniors), Tu., F., 4:00, ASSISTANT PROFESSOR DARLING; Autumn (Seniors), Tu., F., 4:00, ASSISTANT PROFESSOR REEDER; Winter (Seniors), M., Th., 4:00; Spring (Juniors), M., Th., 4:00, ASSISTANT PROFESSOR ELLIS.

2. Practical Ophthalmology in the Central Free Dispensary.—Limited to 10 students in each section. Each student must provide himself with an ophthalmoscope. Each Term of every Quarter. 12 hours. .2Mj. sec. *a*, M., Th., 2:00–3:00, Winter and Spring, ASSISTANT PROFESSOR ELLIS; sec. *b*, Tu., F., 3:00–4:00, Winter, ASSISTANT PROFESSOR REEDER; Autumn and Spring, ASSISTANT PROFESSOR DARLING; sec. *c*, W., Sat., 2:00–3:00, each Quarter, DR. NEHER.

Courses 1 and 2 may be taken in the same quarter, but both are prerequisite to all clinical courses.

3. Clinical, Conference, and Lecture Course.—Prerequisite: courses 1 and 2. Limited to 20 students. Each Quarter, M., Th., 3:00–4:00. 24 hours. .2Mj. Summer, ASSISTANT PROFESSOR REEDER; Autumn, Winter, and Spring, PROFESSOR WILDER.

4. Clinical Course on the Eye at the Illinois Charitable Eye and Ear Infirmary.—Prerequisite: courses 1 and 2. Limited to 10 students each. Each Quarter. F., 4:00–6:00. 24 hours. .2Mj. ASSISTANT PROFESSOR LANE and DR. THEOBALD. Students should register at the same time for course X-4.

5. Clinical Courses at the Cook County Hospital.—In these courses special attention is given to the relation of the eye to general disease. Prerequisite: courses 1 and 2. Limited to 8 students. 24 hours. .2Mj. Summer, Winter, and Spring, Wed., 2:00–4:00, ASSISTANT PROFESSOR DARLING.

6. Normal and Pathological Anatomy and Bacteriology of the Eye.—A course for advanced students and practitioners. Limited to 5 students. Autumn, 3 days each week, Eye and Ear Infirmary. Hours to be arranged. ASSISTANT PROFESSOR LANE OR DR. THEOBALD.

6A. Special Work for Student Assistants in the Dispensary.—Junior or Senior students who have had courses 1, 2 and a clinical course may register as follows:

Monday, Thursday	Two students	2:00-4:00
Tuesday, Friday	Two students	2:00-4:00
Wednesday, Saturday	Two students	2:00-4:00
Each Quarter. .4Mj.		

Similar opportunity is afforded at the Cook County Hospital Out-Patient Clinic from 2:00-4:00 by arrangement with ASSISTANT PROFESSOR DARLING.

7. Refraction.—A practical course (optional) for undergraduates. Limited to 10 students. One Term of Autumn, Winter, and Spring Quarters. Two days a week; hours to be arranged. 12 hours. .1Mj. [Not to be given in 1919-20.] ASSISTANT PROFESSOR DARLING.

8. Refraction.—A special course for practitioners. Limited to 6 students. Tuition, \$25.00. Summer and Spring. Hours to be arranged.

XII. DEPARTMENT OF SKIN AND VENEREAL DISEASES

OFFICERS OF INSTRUCTION

OLIVER SAMUEL ORMSBY, M.D., Professor and Head of the Department of Skin and Venereal Diseases.

ERNEST LEWIS McEWEN, S.M., M.D., Assistant Professor of Skin and Venereal Diseases.

WILLIAM AUGUSTUS QUINN, M.D.; EDWARD ALLEN OLIVER, M.D.; ARTHUR NORTON MACKEY, M.D.; JAMES HERBERT MITCHELL, M.D., Instructors in Skin and Venereal Diseases.

ERNEST WILLIAM POTTHOFF, M.D.; JOHN F. WAUGH, M.D., Associates in Skin and Venereal Diseases.

BERTHA MESERVE SHAFER, M.D., Assistant and Serologist in Skin and Venereal Diseases.

CLARK WYLIE FINNERUD, M.D., Assistant in Dermatology.

CHARLES LELAND SHAFER, M.D., Research Fellow in Dermatology (*James Nevins Hyde Memorial Fund*).

———, Social Service Worker in the Department of Skin and Venereal Diseases.

INTRODUCTORY

The work of this Department is elective and offered to members of the Senior class. Instruction is given by clinical teaching in the College Amphitheater, the Dispensary, and the Cook County Hospital by recitations and by demonstrations to small classes of clinical, bacteriologic, and pathologic phenomena.

Instruction in this Department is supplemented by ample use of the large collection of dermatological plates, atlases, and photographs arranged in cases in proximity to the upper amphitheater; also by use of the Baretta Models procured in Paris for use of this Department.

It is suggested that students begin work in this Department by taking course 1 (open to Juniors in the Spring Quarter), and every student is expected to follow this with course 2. The textbook used is Ormsby, *Diseases of the Skin*.

COURSES OF INSTRUCTION

1. **Skin, Genito-urinary, and Venereal Diseases.**—A recitation and conference course given to the class in sections not exceeding 25. Tu., F., 4:00-5:00. 24 hours. .4Mj. Summer, DR. MITCHELL; Autumn, DR. QUINN AND DR. FINNERUD; Winter, DR. MACKEY; Spring, DR. OLIVER.

2. **Clinical Course.**—A clinical course on the subject of Skin, Genito-urinary, and Venereal Diseases. The clinic has been conducted in the College for many years and is attended by a large number of out-patients of both sexes and all ages. Each Quarter throughout the year. Tu., F., 2:00-4:00. 48 hours. .4Mj. Autumn and Spring, PROFESSOR ORMSBY; Summer, ASSISTANT PROFESSOR McEWEN; Winter, DR. MITCHELL.

3. **Clinical Course in the Central Free Dispensary.**—A clinical course given to the class in small sections in the dermatological and genito-urinary departments of the Central Free Dispensary. The student is here brought in personal contact with patients and required to examine and prescribe for them as in private practice. Limited to 10 students in each section. Each term throughout the year, daily, 2:00-4:00. 24 hours. .2Mj. Sec. a, M., Th., Drs. QUINN AND FINNERUD; sec. c, W., Sat., ASSISTANT PROFESSOR McEWEN AND DR. POTTHOFF.

4. **Student Assistant in the Dispensary.**—Provision is made for three students to assist in the Dispensary each Quarter, one M. and Th., one Tu. and F., and one W. and Sat. 48 hours. .4Mj.

5. **Syphilis.**—A clinical and lecture course at the Cook County Hospital comprising a general survey of the subject of syphilis. Hours to be announced. 12 hours. .2Mj. Autumn, Winter, and Spring, ASSISTANT PROFESSOR McEWEN.

6. **Histopathology and Bacteriology of the Skin.**—A demonstration course including instruction and practical work in methods peculiar to the study of cutaneous pathology and bacteriology. Open to practitioners and limited to 8 students. Hours to be arranged. 24 hours. .4M. Summer, Autumn, and Spring, DR. MITCHELL.

7. **Serology and Therapeutics of Syphilis.**—A laboratory course in the technique of the Wassermann test of the blood and spinal fluid and in the intravenous and intramuscular injections of arsenical and mercurial preparations. Limited to 3 students. First Term, 8:00-10:00, twice weekly; Second Term, 2:00-4:00, twice weekly. .4Mj. Days to be arranged. Autumn, Winter, and Spring, DR. SHAFER.

XIII. GENERAL LECTURES AND OPTIONAL COURSES

1. **Medical Jurisprudence.**—A lecture course supplemented by recitations and conferences. Hours to be announced. .3Mj. Winter.

2. **The History of Medicine (optional).**—A lecture course by PROFESSOR DODSON. Hours to be announced. .1Mj. Winter.

3. **Examinations for Life Insurance (optional).**—A lecture and conference course on the nature and purpose of life insurance, the duties and essential qualifications of the examiner for life insurance, etc. 12 hours. Hours to be announced. .2Mj. Winter, PROFESSOR DODSON, ASSOCIATE PROFESSOR LINNELL, AND ASSISTANT PROFESSOR STEVENSON.

4. **Medical Economics (optional).**—A lecture course in medical economics and ethics. 6 hours. Hours to be announced. .1Mj. Winter.

5. **General Review of the Clinical Branches.**—A conference and recitation course affording Senior students an opportunity to review the clinical branches and to co-ordinate their knowledge in preparation for examinations for license

or for hospital internships and for practice of medicine. In sections limited to 30 students each. 8 hours per week for each section. Summer, M., Th., F., sec. *a*, 2:00–4:00; sec. *b*, 4:00–6:00; sec. *c*, 7:00–9:00 P.M. 1Mj.

6.—A continuation of course XIII-5. Autumn. .1Mj.

7.—A continuation of course XIII-6. Winter. First Term. .5Mj.

8. **Military Medicine.**—A course in medicine, hygiene, sanitation, administration, and surgery as related to the medical departments of the army, navy, and marine corps. Hours to be announced.

LABORATORIES, EQUIPMENT, AND LIBRARIES AT THE UNIVERSITY OF CHICAGO

THE HULL BIOLOGICAL LABORATORIES

On December 14, 1895, Miss Helen Culver, of the city of Chicago, presented to the University of Chicago property valued at \$1,000,000—the whole gift, according to the terms of the letter of endowment, to be devoted to the increase and spread of knowledge within the field of the biological sciences. From this fund there have been erected, at the north end of the University grounds, four buildings to serve as laboratories for the Anatomical, Botanical, Physiological, and Zoölogical Sciences. Medical instruction is given in the Anatomical, Physiological, and Zoölogical Laboratories.

THE ANATOMICAL LABORATORY

The Anatomical Laboratory is 120 by 50 feet and four stories high, exclusive of basement and attic. It was constructed to provide for instruction and research in Anatomy, including Neurology, Gross Anatomy, and Microscopic Anatomy. The first floor is occupied by two large laboratories for microscopic work in Histology and Neurology, a laboratory for research and instruction in Immunology, a photographic room, and two small research laboratories for members of the staff. The second floor contains the research laboratories in Neurology, three laboratories for microscopic work, a chartroom, and a lecture-room. The third floor contains a large laboratory for human dissection, two laboratories for advanced work in microscopic anatomy, and four rooms for members of the staff. The fourth floor contains a second large dissection laboratory, two small laboratories for the same purpose, a museum of anatomical preparations and models, and several small rooms for the staff. The laboratories are well equipped for teaching and research in all branches of anatomy and in immunology.

THE PHYSIOLOGICAL LABORATORY

The Physiological Laboratory is 102 by 52 feet and four stories high, exclusive of the basement and attic. The basement contains a dark-room, two laboratories for advanced courses in physiology, combustion and centrifugal room, two storerooms, and the mechanic's shop. It is connected with the greenhouse, which has been converted into an aquarium and animal room. The first floor contains general laboratories for college and medical courses in physiology, a lecture-room, a storeroom, and a small research laboratory. The second floor contains a large lecture-room, an optical room, and four research laboratories.

The third floor contains two large laboratories and one small laboratory for research in Physiology, one large laboratory and two small ones for research in Physiological Chemistry and Pharmacology, and a balance-room. The fourth floor contains two rooms with animal cages and two operating rooms, a storeroom, a large laboratory for work in Physiological Chemistry, and a laboratory for work in Physiology and Pharmacology. The attic contains animal rooms. Additional animal quarters are provided in a building at Fifty-seventh Street and Ingleside Avenue. The laboratories are well equipped both for general instruction in Physiology, Physiological Chemistry, and Pharmacology, and for advanced and research work in these sciences.

THE ZOÖLOGICAL LABORATORY

The Zoölogical Laboratory is 120 by 50 feet and four stories high, exclusive of the basement. On the first floor are located the library of the biological departments, a synoptical museum, a large laboratory for elementary Zoölogy, and a laboratory for research work in Pathology. The second floor contains one large laboratory for beginners in research and a number of smaller laboratories for more advanced work. The third floor contains three large laboratories for Comparative Anatomy and Embryology and a number of rooms for research. The fourth floor is devoted to the laboratories of Bacteriology, which are supplied with sterilizers, incubators, special microscopes, and other bacteriological apparatus, and are furnished with tables for microscopical work and for the usual laboratory manipulations. The basement contains one large room with glass-covered extension on the south side, designed for an aquarium; two rooms for use as aviaries, vivaria, etc.; one room for paleontological material, and one for taxidermy and museum purposes. The best optical and other apparatus demanded by zoölogical work is provided. There are series of models and charts illustrating embryological and morphological subjects and ample facilities for keeping land and aquatic animals under favorable conditions for study.

THE HOWARD TAYLOR RICKETTS LABORATORY

The Ricketts Laboratory was built with funds provided from the general income of the University and was opened January 1, 1915, to provide temporary quarters for the Department of Pathology and the Department of Hygiene and Bacteriology. It is a one-story brick building, measuring 180 by 180 feet, located on the west side of Ellis Avenue between Fifty-seventh and Fifty-eighth streets. The south half is occupied by the Department of Pathology, the north half by Hygiene and Bacteriology. A central wing provides a lecture-room, and two lateral wings contain animal houses, one for each department. A fireproof building in the court provides for the Museum of Pathology. In addition to general laboratories, research-rooms, preparation rooms, and offices, each department has an equipped chemical laboratory, and there is one room equipped for experimental surgical work.

THE KENT CHEMICAL LABORATORY

The Chemical Laboratory was provided by the generosity of Mr. Sidney A. Kent, is 176 by 64 feet, and is three stories high, exclusive of the basement. An amphitheater seating 750 people forms an annex to the building. Lectures are

given in rooms on the first floor. The laboratory instruction in General Inorganic and Elementary Organic Chemistry is given on the third floor in three large laboratories accommodating 300 students. Each student is given a separate desk supplied with gas and water and is furnished with all the necessary chemicals and apparatus. The laboratories for Analytical Chemistry are on the second and third floors. The advanced work in Chemistry is done in general and private laboratories on the first and second floors. There are a number of small rooms used as balance, combustion, gas-analysis, photographic rooms, etc. The Chemical Library contains full sets of the most important journals, books of reference, and other works relating to Chemistry.

THE LIBRARIES

The General Library, containing about 562,000 volumes, is for the use of students in all departments of the University. Students who have matriculated and paid their library fee may take at one time three volumes from the General Library. These may be kept two weeks, and at the end of that time, if desired, may be renewed for two weeks. Former students may continue the use of the Library by the payment of the library fee of \$2.50 per quarter.

The total number of books at present in the Library is approximately 562,000 accessioned. Number of volumes in Departmental Libraries of departments concerned in medical instruction, March 1, 1919: Biology, including Anatomy, Neurology, Physiology, Bacteriology, Pathology, Zoölogy, Physiological Chemistry, and Pharmacology, 27,499; Chemistry, 4,284; Physics, 4,329.

In addition thereto are many thousand volumes not yet catalogued.

All the branch and departmental libraries are catalogued and classified.

The General Library is open on every week-day from 8:00 A.M. to 10:00 P.M. The Library receives 2,532 current periodical publications, including the transactions and proceedings of learned societies. The Departmental Libraries are closed at 10:00 P.M.

The students of the University are permitted to use the books and periodicals in the Newberry Library and in the Crerar Library, both of which contain a large number of medical and general scientific works.

The Public Library of Chicago is also available to medical students for general reading.

BUILDINGS, EQUIPMENT, AND HOSPITAL FACILITIES AT RUSH MEDICAL COLLEGE

THE CLINICAL BUILDING, located at West Harrison and Wood streets, is 60 by 80 feet and four stories in height. The first floor is occupied by the college library and reading-room. On the second floor are situated the offices of the College, the lower amphitheater, seating 400, and clinical waiting-rooms. The third floor contains the upper amphitheater, seating 530 persons, a large surgical examining and dressing room, five clinical examining rooms, and a waiting-room for patients. The fourth floor is occupied in part by the upper amphitheater and in part by the laboratory for surgical and orthopedic appliances and bandaging.

THE LIBRARY AND READING-ROOM occupies the first floor of the Clinical Building, a most convenient location for students. The library contains 22,034

volumes, 4,653 pamphlets, 14,042 reprints, and files of all the leading medical journals in English, German, and French. During the last college year the library had a daily average attendance of 176 students.

SENN HALL, erected through the munificence of the late Professor Senn and other members of the Faculty, adjoins the Clinical Building on the east. It covers a ground space of 40 by 90 feet, is seven stories in height (including the basement), and of absolutely fireproof construction. The basement and first three floors, affording over 10,000 square feet of floor space, are devoted to the dispensary and the clinical teaching connected therewith. The fourth and fifth floors are occupied by clinical laboratories and recitation rooms. The remaining two stories contain two surgical and medical amphitheaters, seating about 150 each, with necessary waiting and preparation rooms.

THE LABORATORY BUILDING, on the south side of Harrison Street, is 100 by 45 feet in area and six stories in height (including the basement). The basement is occupied by storage-rooms for apparatus, an animal room for the laboratory of Pathology and Bacteriology, and a cloakroom for students. Adjoining the basement is a separate building for the preparation and storage of cadavers by the cold-storage process, with a capacity for about two hundred bodies. The first and second stories are devoted to the Department of Pathology and Bacteriology, which is fully equipped with the necessary microscopes and other apparatus for advanced work in these branches. The third floor is occupied by the Department of Chemistry and Toxicology and is supplied with all the necessary apparatus and materials for advanced work in these branches in their relation to practical medicine. The fourth floor contains four recitation rooms and a laboratory for Pharmacy and Therapeutics. The fifth floor is devoted to advanced work in practical Gross Anatomy and to Operative Surgery.

THE PRESBYTERIAN HOSPITAL, with accommodations for about 420 patients, adjoins the College and is connected with it, so that patients may be transferred directly from the wards to the clinical amphitheaters. In this hospital over 5,000 patients are treated annually, and it thus affords a large amount of valuable material for the clinics.

ATTENDING STAFF OF THE PRESBYTERIAN HOSPITAL

MEDICINE

Attending Physicians: DRs. FRANK BILLINGS, JAMES B. HERRICK, BERTRAM W. SIPPY, WILBER E. POST. *Associate Attending Physicians:* DRs. THEODORE TIEKEN, JAMES MURRAY WASHBURN, ROLLIN T. WOODYATT, ERNEST E. IRONS, RALPH C. BROWN, ASHER F. SIPPY. *Assistant Attending Physicians:* DRs. B. M. LINNELL, SIDNEY STRAUSS, KARL K. KOESSLER, ALEXANDER F. STEVENSON, JAMES R. GREER, JOHN H. MCCLELLAN, GEORGE F. DICK, LEO L. HARDT, FRED M. SMITH, WILLIAM A. THOMAS, W. D. SANSUM.

Resident Physician: DR. CHARLES LELAND SHAFER.

DISEASES OF CHILDREN

Attending Physicians: DRs. JOHN M. DODSON, CLIFFORD G. GRULEE. *Assistant Attending Physicians:* DRs. FRANK W. ALLIN, WALTER H. O. HOFFMANN, WALTER F. WINHOLT.

PSYCHIATRY AND NEUROLOGY

Attending Physicians: DRs. THOR ROTHSTEIN, PETER BASSOE. *Assistant Attending Physicians:* DRs. JAMES C. GILL, GEORGE W. HALL.

SURGERY

Consulting Surgeons: DRs. DAVID W. GRAHAM, WILLIAM T. BELFIELD.

Attending Surgeons: DRs. ARTHUR DEAN BEVAN, DEAN D. LEWIS. *Associate Attending Surgeons:* DRs. CARL B. DAVIS, D. B. PHEMISTER, E. W. RYERSON. *Assistant Attending Surgeons:* DRs. CHARLES A. PARKER (Orthopedic Surgery), GEORGE G. DAVIS, V. C. DAVID, BENJAMIN F. DAVIS, ERNEST M. MILLER, ALBERT H. MONTGOMERY, VICTOR L. SCHRAYER, GOLDEN L. MCWHORTER, F. B. MCCARTY. *Attending Urologists:* DR. H. L. KRETSCHMER, ROBERT H. HERBST. *Attending Oral Surgeon:* DR. FREDERICK B. MOOREHEAD. *Anesthetist:* DR. ISABELLA HERB.

Resident Surgeon: DR. GATEWOOD. *Assistant Resident Surgeon:* DR. GILBERT DILLON WAITE.

OBSTETRICS AND GYNECOLOGY

Associate Attending Obstetricians and Gynecologists: DRs. CAREY CULBERTSON, NOBLE S. HEANEY. *Attending Obstetrician and Gynecologist:* DR. JOHN CLARENCE WEBSTER. *Assistant Attending Obstetricians and Gynecologists:* FRANZ H. HARMS, WILLIAM F. HEWITT.

Out-Patient Department: DRs. FREDERICK WILLIAM ROHR, PAUL C. FOX.

LARYNGOLOGY AND OTOTOLOGY

Attending Laryngologist: DR. STANTON A. FRIEDBERG. *Assistant Attending Laryngologists:* DRs. DAVID FISKE AND EDWIN A. MCGINNIS.

Attending Aurist: DR. GEORGE E. SHAMBAUGH. *Assistant Attending Aurists:* DRs. GEORGE W. BOOT, DANIEL B. HAYDEN.

OPHTHALMOLOGY

Attending Ophthalmologist: DR. WILLIAM H. WILDER. *Assistant Attending Ophthalmologists:* DRs. JOHN B. ELLIS, CHARLES G. DARLING, WM. G. REEDER.

DERMATOLOGY

Attending Dermatologist: DR. OLIVER S. ORMSBY. *Assistant Attending Dermatologists:* DRs. ERNEST L. MCEWEN, J. FRANK WAUGH, JAMES HERBERT MITCHELL.

PATHOLOGY

Attending Pathologists: DRs. LUDVIG HEKTOEN, EDWIN R. LECOUNT.

Resident Pathologist: DR. BURRELL O. RAULSTON.

Serologist: DR. HOMER K. NICOLL.

CHEMISTRY

Attending Chemist: DR. WALTER S. HAINES.

X-RAY DEPARTMENT

Attending Roentgenologist: DR. CASSIE BELL ROSE.

THE CHILDREN'S MEMORIAL HOSPITAL, with six buildings and about 170 exclusively free beds, provides exceptionally valuable clinical material for the study of the medical and surgical affections of infancy and childhood. Under the contract entered into between the trustees of this hospital and Rush Medical College this material is made available to the Faculty and students of Rush Medical College for instruction and research.

STAFF OF THE CHILDREN'S MEMORIAL HOSPITAL

Consulting Staff: DRs. WALTER S. HAINES, ARTHUR D. BEVAN, JOHN M. DODSON, LUDVIG HEKTOEN, FRANK BILLINGS, J. CLARENCE WEBSTER, WILLIAM H. WILDER, OLIVER S. ORMSBY, GEORGE F. SHAMBAUGH, M. L. HARRIS.

Attending Physicians: DRs. SAMUEL J. WALKER, HENRY F. HELMHOLZ, SAMUEL AMBERG. *Assistants:* DRs. G. L. KAUFFMAN, GEORGE E. BAXTER, CHARLES SCHOTT, H. H. KLEINFELL, LORIN C. COLLINS, SIGURD KRAFT, ARTHUR HENRY PARMELEE.

Attending Neurologist: DR. THOR ROTHSTEIN.

Attending Surgeons: DR. COLEMAN G. BUFORD. *Associates:* DRs. BENJAMIN F. DAVIS, HERMAN L. KRETSCHMER. *Assistant:* DR. JOHN A. GRAHAM.

Attending Orthopedic Surgeon: DR. EDWIN W. RYERSON. *Assistants:* DRs. ROBERT O. RITTER, JACOB MYERS.

Attending Laryngologist: DR. DAVID FISKE. *Assistant Attending Laryngologists:* DRs. JOHN C. WILLIAMS, DANIEL B. HAYDEN.

Attending Ophthalmologist: DR. ALFRED M. HALL. *Assistant:* DR. DANIEL EISS.

Attending Dermatologist: DR. ARTHUR N. MACKEY.

Pathologist: DR. RICHARD F. AUSTIN.

Resident Physician: DR. KATHARINE MAYER. *Assistant Resident Physician:* DR. PETER M. MATTILL.

THE HOME FOR DESTITUTE CRIPPLED CHILDREN, situated about a half-mile from the College, has about 100 beds and an out-patient department. Under the contract recently entered into between the directors of the Home and the trustees of Rush Medical College this clinical material is made available to the Faculty and students of the College for instruction and research. It affords excellent opportunities in Orthopedic Surgery.

STAFF OF THE HOME FOR DESTITUTE CRIPPLED CHILDREN

CONSULTING STAFF

DR. JAMES B. HERRICK, Department of Medicine.

DR. ARTHUR DEAN BEVAN, Department of Surgery.

DR. JOHN M. DODSON, Department of Pediatrics.

DR. THOR ROTHSTEIN, Department of Neurology.

DR. GEORGE E. SHAMBAUGH, Department of Laryngology and Otology.

DR. WILLIAM H. WILDER, Department of Ophthalmology.

DR. LUDVIG HEKTOEN, Department of Pathology.

DR. OLIVER S. ORMSBY, Department of Dermatology.

ATTENDING STAFF

DRS. E. W. RYERSON, WALLACE BLANCHARD, AND CHARLES A. PARKER, Orthopedic Surgeons.

DR. S. R. SLAYMAKER, Department of Medicine.

DR. C. G. GRULEE, Department of Pediatrics.

DR. PETER BASSOE, Department of Neurology.

DR. JOHN B. ELLIS, Department of Ophthalmology.

DR. J. E. RHODES, Department of Nose and Throat.

DR. GEORGE W. BOOT, Department of Otology.

DR. E. L. MCEWEN, Department of Dermatology.

DRS. DEAN D. LEWIS AND CARL B. DAVIS, Department of General Surgery.

MR. CHARLES O. CARLSTROM, Department of Kinesitherapy.

DR. FREDERICK BROWN MOOREHEAD, Department of Oral Surgery.

ASSISTANT ATTENDING STAFF

DRS. THOMAS P. LYNAM, HARRISON WILLIS MALTBY, AND JACOB MYER, Department of Orthopedic Surgery.

DR. WILLARD WOODARD DICKER, Department of Medicine.

ARTHUR H. PARMELEE, Department of Pediatrics.

DR. DALLAS B. PHEMISTER, Department of General Surgery.

DR. EDWIN MCGINNIS, Department of Nose and Throat.

THE JOHN McCORMICK INSTITUTE FOR INFECTIOUS DISEASES, endowed by Mr. and Mrs. HAROLD McCORMICK, with the DURAND HOSPITAL is situated one block south of the College. The hospital, which has about 50 beds, receives only charity cases afflicted with contagious disease. The students of the College, in small groups, visit and study these cases in the course of their required work.

STAFF OF THE DURAND HOSPITAL OF THE JOHN McCORMICK INSTITUTE FOR INFECTIOUS DISEASES

Consulting Physicians: DRS. FRANK BILLINGS, JOHN M. DODSON, JAMES B. HERRICK, SAMUEL R. SLAYMAKER.

Consulting Surgeon: DR. DEAN D. LEWIS.

Consulting Laryngologist: DR. STANTON A. FRIEDBERG.

Attending Physicians: DRS. GEORGE H. WEAVER, ERNEST E. IRONS.

IN THE COOK COUNTY HOSPITAL, which is situated opposite the College, are treated about 20,000 patients annually. In this institution are given about forty clinics a week, including all varieties of medical and surgical cases. The facilities for the study of Pathology which are offered at the Cook County Hospital are unexcelled in this country. Between 300 and 400 postmortems are made annually in the necropsy theater by Professor LeCount, Professor Wells, and the other pathologists of the hospital.

Clinical courses in the Cook County Hospital are offered to the students of Rush Medical College by the following members of the Faculty:

Attending Physicians: DRS. SAMUEL R. SLAYMAKER, JOS. L. MILLER, JOS. A. CAPPS, THEODORE TIEKEN, MOSES M. PORTIS, LUDWIG M. LOEB, ERNEST E. IRONS, WILBER E. POST, WALTER HAMBURGER, LEON BLOCH, ELLIS K. KERR, ROGER T. VAUGHAN, ARCHIBALD HOYNE, KARL K. KOESSLER, WILLIAM WOODARD DICKER.

Attending Neurologist: DR. GEORGE W. HALL.

Attending Pediatricists: DRs. MAY MICHAEL, AUGUST STRAUCH.

Attending Surgeons: DRs. CHARLES A. PARKER, A. BELCHAM KEYES, PAUL OLIVER, DANIEL EISENDRATH, CARL B. DAVIS, PAUL F. MORF, HUGH MCKENNA.

Associate Attending Obstetrician: DR. GEORGE W. LEE.

Associate Attending Gynecologist: DR. CAREY CULBERTSON.

Attending Laryngologists: DRs. STANTON A. FRIEDBERG, GEORGE W. BOOT, ROBERT SONNENSCHN.

Attending Ophthalmologist: CHARLES G. DARLING.

Attending Pathologists: DRs. E. R. LECOUNT, H. G. WELLS.

In 1915 the COUNTRY HOME FOR CONVALESCENT CHILDREN, at Prince Crossing, Illinois, a few miles west of Chicago, entered into affiliation with Rush Medical College. It has for its purpose the care, cure, and education of helpless and crippled children.

ATTENDING STAFF OF THE COUNTRY HOME FOR CONVALESCENT CHILDREN

Orthopedic Surgeons: DR. JOHN RIDLON, Chief of Staff; DRs. WALLACE BLANCHARD, CHARLES A. PARKER, HENRY B. THOMAS.

Consulting Surgeon: DR. ARTHUR DEAN BEVAN.

Consulting Physician: DR. JAMES B. HERRICK.

Laryngologist and Otolologist: DR. GEORGE E. SHAMBAUGH.

Oculist: DR. WM. G. REEDER.

Oral Surgeon: DR. FREDERICK B. MOOREHEAD.

In 1915 ST. JOSEPH'S HOSPITAL, 2100 Burling Street, entered into affiliation with Rush Medical College. This hospital, conducted by the Sisters of Charity, St. Vincent de Paul, has 210 beds.

ATTENDING STAFF OF ST. JOSEPH'S HOSPITAL

Physicians: DRs. ARTHUR A. SMALL, GEORGE F. DICK, E. H. HATTON.

Neurologist: DR. RALPH HAMILL.

Surgeons: DRs. HUGH MCKENNA, CARL WAGNER, WILLIAM H. HESSERT.

Obstetricians and Gynecologists: DRs. PHILIP S. DOANE, WALLACE F. GROSVENOR.

Laryngologists and Otolologists: DRs. J. HOLINGER, A. A. HAYDEN, J. Z. BERGERON.

Ophthalmologist: DR. JOHN B. ELLIS.

Pediatricist: DR. HENRY F. HELMHOLZ.

Genito-urinary Department: DR. CHARLES M. MCKENNA.

Dermatologist: DR. WILLIAM A. QUINN.

Pathologist: DR. GEORGE F. DICK.

Oral Surgeon: DR. T. W. BROPHY.

Proctologist: DR. FRANK E. DAVID.

Extra-mural courses.—Through the courtesy of the medical attendants and managing officers of several hospitals and dispensaries within convenient distance of the College extra-mural clinical courses are offered to the students of Rush,

in small groups, and the clinical material available for teaching has thus been greatly augmented. Such courses are offered at the West Side Hebrew Dispensary, treating over 30,000 cases annually; at St. Luke's Hospital, with about 2,000 cases annually; at the Illinois Charitable Eye and Ear Infirmary, treating about 1,000 cases; at the Chicago Isolation Hospital; and at St. Anthony's Hospital, with about 100 beds.

FELLOWSHIPS, HOSPITAL INTERNES, AND PRIZES

(At Rush Medical College)

FELLOWSHIPS

The following fellowships have been provided in the several departments:

1. The Fellowship in Chemistry. Not to be awarded for 1919-20.
2. The Fellowship in Pathology. Awarded to WILLIAM GEORGE HIBBS, S.B.
3. The "Dane Billings Memorial Fellowship in Medicine," founded by Professor Frank Billings. Awarded to Dr. ———.
4. The "Daniel R. Brower Fellowship," founded by the late Professor Daniel Roberts Brower, in the Department of Medicine. Not awarded for 1919-20.
5. The "Nicholas Senn Fellowship in Surgery," founded by the late Professor Nicholas Senn. Awarded to Dr. EDWIN M. MILLER.
6. The "A. D. Thompson-Bevan Fellowship in Surgery and House Surgeonship in the Presbyterian Hospital," established in 1915 through the generosity of Mr. A. D. Thompson, Duluth, Minn., and Professor Arthur Dean Bevan. Awarded to Dr. GATEWOOD.
7. The "Francis A. Hardy Fellowship in Surgery and Assistant House Surgeonship in the Presbyterian Hospital," maintained by Mr. Francis A. Hardy. Awarded to ———.

SCHOLARSHIPS

8. The E. Fletcher Ingals Scholarship, founded by the late Professor E. Fletcher Ingals, Head of the Department of Laryngology and Otology.

HOSPITAL INTERNES

Positions as internes, through a competitive examination held by the respective hospital staffs, are open each spring to graduates of Rush Medical College in the following Chicago hospitals: Presbyterian, Children's Memorial, Home for Destitute Crippled Children, Cook County, Michael Reese, St. Joseph's, St. Elizabeth's, St. Luke's, Augustana, Chicago, Alexian Brothers', Passavant, Chicago Polyclinic, German, Norwegian, Illinois Charitable Eye and Ear Infirmary, Baptist, St. Anthony's, Swedish, Chicago Maternity, Bridewell, Columbus, United States Marine, Washington Park, and others, and in a much larger list of institutions outside of the city of Chicago which make appointments from the roll of qualified students of the Senior class in Rush Medical College. The occupants of these positions receive their board and lodging and acquire experience in every department of practical Medicine and Surgery.

For several years past every graduate who was able and willing to accept an internship has secured such, and it has been impossible to fill a number of vacancies in desirable hospitals.

PRIZES

The Benjamin Rush Prize.—A medal of the value of \$50 is given by the Faculty at each commencement to that member of the graduating class who passes the highest examination in every department of Medicine represented that year in the examination for the degree. Awarded in 1919 to Richard Cotter Gamble.

The Daniel Brainard Prize.—A medal is annually given by the Faculty to the student who makes and presents to the College Museum the best accepted dissertation in Surgical Anatomy. Awarded in 1919 to Orwood J. Campbell.

The Freer Prizes.—These prizes are derived from the income of a fund presented to the College by the late Nathan M. Freer, of the Board of Trustees, as a memorial to the names of two honored members of his family long identified with the highest interests of this institution.

*The J. W. FREER Medal and the sum of \$50 are awarded as a first prize to that member of the Junior or Senior class who presents the best dissertation involving original investigation on the part of the student. A second prize of \$25 is awarded to the next successful competitor. The dissertations must be submitted to the Dean of Students on or before April 1, 1920.

The prize was awarded in 1919 to Seymour J. Cohen.

*The L. C. P. FREER Medal and the sum of \$50 are offered as a first prize to that member of the Freshman or Sophomore class who presents the best dissertation involving original investigation on the part of the student. A second prize of \$25 will be awarded to the next most successful of the competitors. *This prize will be competed for by students in the medical courses of the University.* The dissertation must be placed in the hands of the Dean of Students by April 1, 1920.

This prize was awarded in 1919 to Louis Leiter.

The De Laskee Miller Prize given by his daughter, Mrs. C. C. Curtiss, for the best work in the department of Obstetrics and Gynecology, was awarded to Louise Dorothy Wagner.

Medical scholarships as prizes for research.—The Trustees of the College have established three scholarships in the Junior and Senior years as prizes for the best dissertations involving original work in any of the branches usually included in the first two years of the medical curriculum: anatomy, both gross and microscopic, embryology, neurology, physiology, physiological chemistry, pharmacology, bacteriology, or pathology. This competition is open to students completing the second year of the medical course in university medical schools whose standards are equal to those of Rush Medical College. The first prize scholarship is the tuition for three quarters in Rush Medical College (\$180), the second prize tuition for two quarters (\$120), and the third prize tuition for one quarter (\$60). Dissertations must be sent to the Dean of Medical Students, Rush Medical College, on or before April 1, 1920.

No awards in 1919.

* *Rules governing the award of the Freer medals.*—(1) The candidate must present his dissertation in typewritten form. (2) Each candidate may present but one dissertation. (3) As the purpose of the medals is to stimulate research, only those dissertations will be considered that have been written in competition for the medal. This will exclude those published previous to their presentation to the committee and those that were written for a degree. (4) Applicable to the J. W. Freer Medal only. Only those dissertations that are submitted by bona fide Juniors and Seniors will be considered. Students acting as assistants to instructors and receiving compensation therefor cannot compete for the prize.

The Edward L. Holmes Prize.—In honor of the late Edward L. Holmes, for many years professor of diseases of the eye and ear in Rush Medical College and for several years its president, who during his long career rendered distinguished services to the institution, the Trustees have established the Edward L. Holmes Prize, for original research, to consist of a table and scholarship for one season at the Marine Biological Laboratory at Woods Hole, Mass. This prize is offered in recognition of the great service which is rendered to the medical sciences by research work in biology. The prize will not be offered for 1919–20.

The Henry M. Lyman Prize.—In memory of Henry M. Lyman, who for many years devoted much of his best energies and his unusual ability to the upbuilding of Rush Medical College, and who served successively as Professor of Physiology and Neurology and Professor of Medicine, and who was later Dean of the Faculty, a fund has been created by his children, the proceeds of which, amounting to \$25 a year, will be offered as a prize to the member of the Junior or Senior class who shall present the best dissertation on a topic connected with internal medicine. This dissertation must include the results of original laboratory or ward work or of personal clinical observation. Before the work is undertaken by the student the Head of the Department of Medicine should be consulted as to the choice of subject and other details.

Not awarded in 1919.

The Howard T. Ricketts Prize.—In memory of Dr. Howard Taylor Ricketts, at one time a member of the Department of Dermatology, who died of typhus fever, while investigating that disease, in the City of Mexico, May 3, 1910, this Department has established a prize in Dermatology. This prize, of the value of \$25, will be awarded annually to the student presenting the best dissertation embodying the results of original investigation on some topic related to Dermatology.

SCHOLARSHIPS AND OTHER AID

(At the University of Chicago)

A. HONOR SCHOLARSHIPS

Honor Entrance Scholarships.—To a limited number of students of high rank from co-operating high schools honor scholarships (\$150 in tuition fees) are granted each year. Holders of honor scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter if the holder's work is not maintained at a satisfactory grade.

Competitive Examination Entrance Scholarships.—In connection with the annual conference of the University in co-operation with its secondary schools held at the University in April of each year competitive examinations in certain subjects are open to Seniors in the co-operating high schools. Each student is expected to take a principal and a secondary examination in subjects of his own choice within certain limits designated by the University. There are likewise contests in reading aloud and effective speaking. A total of eleven scholarships is given covering tuition (\$150) for the next academic year.

Second-Year Honor Scholarships.—To twenty Junior College students who have shown exceptional ability in the work of the first year honor scholarships

are granted for the second year (three quarters) for the undergraduate course. One of these is called "The Lillian Gertrude Selz Scholarship" and grants full annual tuition fees plus \$80 in cash to the young woman who completes the first year with highest standing.

Senior College Honor Scholarships.—To twelve Senior College students nominated by the departments for excellent work in the Junior College courses honor scholarships are granted to cover the tuition fees of the third year.

Graduate Honor Scholarships.—Twenty scholarships are assigned to students who have completed with honor the work of the Senior College. Each department of the University, with the approval of the Committee on Scholarships, has the privilege of naming a student who is for that year the honor student of the Senior College in that department, and to this student there is given a graduate scholarship yielding in each case a sum equal to the University fees for three quarters, provided the student continues his studies in the Graduate Schools. The assignments are made in the Spring Quarter, and in no case does a scholarship continue beyond the end of the Spring Quarter next following the date of assignment.

Undergraduate.—A limited number of scholarships yielding a part or all of the tuition fees for three quarters are available for undergraduate students of attainment and promise. Holders of these scholarships are not required to render service to the University. These scholarships may be revoked at the end of any quarter if the holder's work is not maintained at a satisfactory grade.

The following specially endowed honor scholarships are also available for undergraduate students:

"The Kelly Scholarship," which yields the annual tuition fees.

"The Walter D. Löwy Scholarship," which yields full annual fees and is granted to a student of high scholarship, preferably to a person of the Jewish faith.

"The Henry C. Lytton Scholarship," which yields the annual tuition fees.

"The Marie J. Mergler Scholarship," which yields annual fees to a young woman student specializing in Physiology.

"The Joseph Reynolds Scholarships," which yield \$1,455 per year, available in tuition fees for men students.

"The Scammon Scholarship," which yields \$25 toward the tuition fees of a Chicago student.

"The Charles H. Smiley Scholarship," which yields full annual fees and is granted to a student of high scholarship, preferably to a colored student.

"The Peter Tilton Scholarship," which yields \$50 in tuition fees.

"The Catherine M. White Scholarships," which yield annual fees for three students of high scholarship.

B. COMPETITIVE AND PERSONALLY BESTOWED SCHOLARSHIPS

Certain scholarships are bestowed either by examination or by personal appointment as follows:

"The Enos M. Barton Scholarship," endowed by Mr. Enos M. Barton, of Chicago, provides for the tuition fees of a student for three quarters. It is awarded annually to an undergraduate student whose scholarship in preparatory work and in college shall reach B, and who shall maintain this standing subject to forfeiture.

"The *Permelia Brown Scholarship*," about \$1,250 per annum, provided for under the will of *Permelia Brown*, offers aid to unmarried American-born women students, residents of Chicago, Cook County, Illinois. Application should be made to the Dean of the Faculties.

"The *Civil Government Scholarship*" yields \$200 annually: one prize of \$150 and one of \$50. The prizes are given on the basis of an examination in the "*Civil Government of the United States*." The examination is held in November, and is open to all students who have been in residence at least three quarters, who have not more than twelve majors, and who have an average grade of C. No award is made unless the examination mark is at least 80 per cent.

"The *Colby Scholarships*" yield full annual tuition fees for five graduates of *Wayland Academy*.

"The *Zwinglius Grover Memorial Scholarship*," endowed by the *Alumnae Association of Dearborn Seminary*, yields annual fees for a woman student.

"The *David Blair McLaughlin Prize*." This prize of approximately \$50, the annual net income of \$1,000, established in memory of *David Blair McLaughlin*, 1895-1914, a student in the *College of Literature of the Class of 1916*, is awarded annually to a student having credit for not more than two years of college work who has shown special skill and sense of form in the writing of English prose. The competition occurs in the Spring Quarter.

"The *La Verne Noyes Foundation*" provides tuition scholarships for deserving students who: (1) shall themselves have served in the Army or Navy of the United States in the war for liberty into which the republic entered on April 6, 1917, providing that such service was terminated by honorable discharge; or (2) shall be descendants by blood of anyone in service in the Army or Navy of the United States who served in said war; or (3) shall be descendants by blood of anyone who served in the Army or Navy of the United States in said war, provided that such service was terminated by an honorable death or an honorable discharge.

"The *Pillsbury Academy Scholarship*" yields \$60 annually toward the tuition fees of a graduate of *Pillsbury Academy*.

"The *Howard T. Ricketts Prize*," about \$250, the net annual income of \$5,000, is awarded on the third day of May to a student of the University of Chicago presenting the best results in research in Pathology or Bacteriology. Awarded to *Emanuel B. Fink* and *Frederick William Mulsow*.

"The *Elbert H. Shirk Scholarship*," available for students nominated by the *Shirk Estate*, Peru, Indiana, yields the annual tuition fees.

"The *Henry Strong Scholarships*," provided for under the will of *General Henry Strong*, offer aid to students possessing not only zeal for scholarship but also character and those traits tending to leadership. Four scholarships, yielding in the aggregate \$1,000, will be assigned annually. Application should be made to the President before August 1.

"The *Talcott Scholarships*," endowed by *Mr. William A. Talcott*, of Rockford, Illinois, provide tuition fees to the amount of \$480 per year. This fund is reserved for graduate students, preferably graduates of *Rockford College*.

"The *University Scholarship*," which gives full annual fees to a student of high scholarship specializing in Semitics.

Three scholarships, tuition fees for one quarter, are awarded to the members of the Freshman debating team.

Five "Public Speaking Scholarships" (tuition fees for one quarter) are granted to the winners in the quarterly Public Speaking Contests in the Junior Colleges.

"Oratorical Contest Scholarships" are granted to Senior College students annually as follows: the first prize, tuition fees for three quarters; the second, tuition fees for two quarters; the third, tuition fees for one quarter.

"The University Debate Scholarships" provide for the awarding of six scholarships, tuition fees for two quarters, to the six members of the University debating teams.

A prize of \$100 founded in memory of Mrs. Florence James Adams is offered to students for excellence in artistic reading. The competition occurs in the Spring Quarter.

"Julius Rosenwald Oratorical Prizes" are granted to Senior College students annually as follows: \$100 cash to the speaker ranking first; \$50 cash to the speaker ranking second. The competition occurs in the Spring Quarter.

Medical scholarships as prizes for research.—In order to encourage the investigative spirit and method among prospective medical students in the list of colleges recognized by the University of Chicago, the University offers three or four prize scholarships in the Medical Courses for the best dissertations involving original work in one of the sciences fundamental to medicine: physics, chemistry, or any of the biological branches. Two or three of these are open to undergraduates only, as follows: The first prize scholarship, a sum equal to the tuition for three quarters (\$180); the second scholarship, a sum equal to the tuition for two quarters (\$120); and the third scholarship, a sum equal to the tuition for one quarter (\$60). Students submitting dissertations in this group must be members of the Senior class of the college which they are attending and must secure the Bachelor's degree from said college and be eligible to enter the Graduate School of the University of Chicago in order to claim the scholarship won.

One prize scholarship, yielding a sum equal to the tuition for three quarters (\$180), for a dissertation similar to the above is open only to graduate students in these colleges.

The competition for these prize scholarships in medicine is open only to students in colleges which are in the recognized list of the University of Chicago.

Dissertations must be in the hands of the Dean of Medical Students, University of Chicago, on or before April 1, 1920. Further particulars in regard to these scholarships may be had on application to the Dean.

N.B.—*These prize scholarships may not be applied on deferred tuition bills or on notes.*

C. UNIVERSITY SERVICE

1. DEPARTMENTAL SERVICE

a) Graduate.—A limited number of assignments to service, yielding a part or all of the tuition fees for three quarters, are available for graduate students of attainment and promise. This service is usually rendered in the department in which the student is doing the major part of his work. **Students in departmental service pay their tuition fees in cash at the beginning of each quarter.** At the close of the quarter they receive a cash payment for the amount of the service if it has been satisfactorily rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses. Application should be made to the Deans of the Graduate Schools.

b) *Undergraduate*.—On recommendation of departments a limited number of assignments to departmental service are made to students in the Senior Colleges. Such students render ten hours' service a week in the departments by which they have been recommended. Application should be made to the Dean of the College of Science and to the Dean of the School of Commerce and Administration.

2. LIBRARY SERVICE

Applicants for positions in Library service are appointed to service by the Libraries. Students holding such appointments must maintain a grade of academic work satisfactory to their Deans and of service satisfactory to the Libraries. Such students are required to pay their fees in cash at the office of the Cashier within the first five days of the quarter. For whatever service they may satisfactorily render they will be paid in cash at the end of the quarter.

3. MISCELLANEOUS SERVICE

Other forms of student service are: (a) messenger service at the Information Office, applications for which should be addressed to the Cashier; (b) service in the University Choir, applications for which should be addressed to the Director of the University Choir; (c) service in the University Band, applications for which should be addressed to the Director of the University Band; (e) service in the Commons, the compensation being furnished in board. Inquiries with regard to this service should be addressed to the Director of the Commons; (f) temporary stenographic or clerical service for members of the Faculty or administrative officers, and occasionally special service in the laboratories. When such opportunities occur, notices are posted on the bulletin board in front of Cobb Lecture Hall, and detailed information is obtainable at the Employment Bureau.

4. OUTSIDE EMPLOYMENT

The University maintains an Employment Bureau through which many kinds of work are found for students who are compelled to depend in whole or in part upon their own resources.

D. LOAN FUNDS

From funds created by friends of the University loans are made to many students of worth and promise who need temporary aid. These funds are limited and are usually exhausted early in the academic year.

A special circular entitled *Assistance to Students at the University of Chicago* will be sent on request. It gives details concerning all the forms of aid, routine of application, etc.

FELLOWSHIPS

1. *The University Fellowships*.—The University appropriates annually the amount of twenty-two thousand one hundred and forty dollars (\$22,140) for Fellowships in the Graduate Schools and \$3,075 in the Divinity School. These Fellowships are awarded by the Trustees, upon the recommendation of the President and the nomination of particular departments, to graduate students who desire to pursue advanced work in some special line. About one hundred Fellowships, ranging in individual value from \$120, or tuition fees for three quarters, to \$520, are assigned each year.

The University asks of its Fellows a modicum of service, consisting of work (a) as an instructor; (b) as an assistant in reading examination papers; (c) as an assistant on a University journal; or (d) as an assistant in one of the departmental laboratories, museums, or libraries. In no case is a Fellow expected to devote so much time to the work here indicated as to interfere seriously with his own study.

Each Fellow makes a written report to the Dean at the beginning of each quarter. This report outlines his work as a student, and the work assigned to him as an officer of the University for the current quarter, and is indorsed by the head of the department. The report blanks may be procured at the Dean's office.

2. *Applications for Fellowships.*—Applications for Fellowships should be addressed to the Deans of the Graduate Schools of the University and should be in their hands on or before March 1.

3. *Appointments to Fellowships.*—

a) *Date.*—The annual assignment of Fellowships is made early in April. A Fellowship is available for any three of the four quarters, beginning with the Summer Quarter, following the date of appointment.

b) *Attainments required.*—The candidate must have attained proficiency in some department. In general, he should have spent at least one year in resident study after receiving his Bachelor's degree. In making the appointment special weight is given to dissertations indicating the candidate's ability to conduct original investigation.

4. *Special Fellowships.*—In addition to the regular University Fellowships mentioned above, there are special Fellowships offered by individuals. These vary somewhat in number and amount from year to year. At present they are as follows:

a) *The Joseph B. Loewenthal Fellowship in Chemistry*, endowed by Mr. Berthold Loewenthal, of Chicago, as a memorial of his son, Joseph B. Loewenthal. It yields about \$400 to the incumbent annually appointed, and is awarded on the nomination of the Department of Chemistry and the recommendation of the President of the University.

b) *The Gustavus F. Swift Fellowship in Chemistry*, endowed by Mrs. Gustavus F. Swift, Chicago, as a memorial of her husband, Gustavus F. Swift. It yields about \$520 to the incumbent annually appointed, and is awarded for especial ability in research on the nomination of the Department of Chemistry and the recommendation of the President of the University.

c) *The Edith Barnard Memorial Fellowship in Chemistry*, established in memory of Dr. Edith Barnard, yields \$120 a year, and is awarded by the University, on nomination of the Department of Chemistry, to some deserving graduate student.

MEDICAL SOCIETIES

The fact that a very large number of medical men practice in Chicago has led to the development of a number of medical societies, general and special. Among the more interesting to medical students in the early years of their course is the Chicago Pathological Society. A large number of clinical societies will interest the student, particularly in the later years of his course.

The University of Chicago Biological Club meets on the second Tuesday evening of each month at 7:45 sharp. At the meetings of this society the advanced work and original research of the various laboratories will be reported, and topics of general medical and scientific interest will be discussed. The meetings are open to medical students. The Society holds no meetings during the Summer Quarter.

ALUMNI ASSOCIATION

The Alumni Association of Rush Medical College holds yearly meetings. These meetings precede the regular commencement of the College, which will occur on June 16, 1920. All graduates of the College in good standing are eligible to membership, which can be obtained by the payment of one dollar, the annual dues. The officers for the year ending July 1, 1919, were as follows:

OFFICERS

PRESIDENT—James B. Herrick, '88, Chicago
 FIRST VICE-PRESIDENT—Frederick A. Speik, '07, Los Angeles
 SECOND VICE-PRESIDENT—
 THIRD VICE-PRESIDENT—F. B. Moorehead, '03, Chicago
 NECROLOGIST—J. J. STOLL, '85, Chicago
 TREASURER—Elmer L. Kenyon, '96, 104 South Michigan Avenue, Chicago
 SECRETARY—Charles A. Parker, '91, 7 West Madison Street, Chicago

DIRECTORS

ONE YEAR

George H. Coleman, '13, Chicago
 B. M. Linnell, '93, Chicago

TWO YEARS

Asher F. Sippy, '92, Chicago
 William E. Duncan, '81, Chicago

THREE YEARS

Harold N. Moyer, '79, Chicago
 John E. Rhodes, '86, Chicago

ALUMNI RELATIONS COMMITTEE

John Ritter, '80, *Chairman*

Oliver H. Avey, '01, Payette, Idaho	E. F. McCampbell, '12, Columbus, Ohio
(Tri-State Oregon, Washington, and Idaho)	F. A. Speik, '07, Los Angeles, Cal.
J. W. Chamberlin, '82, St. Paul, Minn.	Lorenzo N. Grosvenor, '02, Huron, S.D.
J. K. Humphreys, '06, Salt Lake City, Utah	Fred A. Tucker, '97, Noblesville, Ind.

BULLETIN COMMITTEE

Morris Fishbein, '12	Bird McP. Linnell, '93
Elmer L. Kenyon, '96	Herbert Mitchell, '13

ENTERTAINMENTS AND ALUMNI CLINICS

Ernest L. McEwen, '97, *Chairman*

E. E. Irons, '03

Charles H. Parkes, '97

John Ritter, '80

Edward O. Hutchinson, '91

MEMBERSHIP COMMITTEE

Bird McP. Linnell, '93, *Chairman*

Harry E. Mock, '06

E. L. McEwen, '97

Eugene S. Talbot, Jr., '10

John Ritter, '80

E. E. Kenyon, '96

GRADUATES FOR THE SESSION OF 1918-19

The degree of Doctor of Medicine was conferred on the following students at the close of the Summer Quarter, August 30, 1918. These students entered the Medical school before the Summer Quarter, 1914, and were eligible for graduation after the completion of four years of medical work.

Joseph Oliver Balcar

Presbyterian Hospital

Jose M. Carino

St. Francis Hospital, Pittsburgh, Pa.

Nicholas Jeffries Clecak

Harry Lee Huber

Presbyterian Hospital

Merrill Maitland Myers

Des Moines Methodist Hospital, Des Moines, Iowa.

Delon Acree Williams

Presbyterian Hospital

At the close of the Autumn Quarter, December 20, 1918:

James Clyde Elder

Wesley Memorial Hospital

Earl D. Huntington

Assistant, Syphilis Department, Rush Medical College

Cecil Evan Lowe

Washington Boulevard Hospital

Fred Lowe Soper

Cook County Hospital

The degree of Doctor of Medicine was conferred on the following students at the close of the Winter Quarter, March 21, 1919. These students had completed five years of medical work, the fifth year consisting of an acceptable service as an interne in a hospital approved by the faculty of the College.

Benjamin Jaffee Birk

Lloyd Lewis Merriman

Barnet Edward Bonar

Willson Bridges Moody

Frank Rollo Doll

Claude S. Mumma

Theodore Adolph Estrem

Charles Thomas Nellans

Archie Leland Gleason

James Joseph Noonan, Jr.

Grover Quinton Grady

Carl Theodore Olson

Jacob Frank Henken

Paul Arthur Paulson

Jacob J. Horwitz

Bernard Schlossmann

Earl Christian Kading

John Mark Simpkin

David Kaplan

Fred Henry Stangl

Robert Lee Kerrigan

Arthur Teninga

Peter Milton Mattill

Willard David White

John Riley Merriman

The following students received Certificate of the completion of the four years of the medical course at the close of the Summer Quarter, August 30, 1918:

Isaac Walter Allen —	Grant Hospital
Joseph K. Calvin	Cook County Hospital
Clark Wylie Finnerud —	Presbyterian Hospital
Philip Luther Halenbeck —	St. Luke's Hospital
Clark John Laus	Presbyterian Hospital
John F. Laval	St. Francis Hospital, LaCrosse, Wis.
Pierce McKenzie	Presbyterian Hospital
Tom Francis O'Toole —	San Diego General Hospital, San Diego, Cal.
Henry Robert Powers —	Cincinnati General Hospital, Cincinnati, Ohio
Frank Woodford Stevenson —	Cincinnati General Hospital, Cincinnati, Ohio

At the close of the Autumn Quarter, December 20, 1918:

Florence Olive Austin	San Diego General Hospital, San Diego, Cal.
Hayden Emil Eberhardt Barnard	Children's Memorial and Columbus Hospital, Milwaukee, Wis.
Vincent Brendan Bowler	Presbyterian Hospital
Albert Grover Peters	Washington Boulevard Hospital
J. Lisle Williams	St. Luke's Hospital

At the close of the Winter Quarter, March 21, 1919:

George Kriker Armen —	St. Francis Hospital, La Crosse, Wis.
Elmer Nathaniel Ascherman	Cook County Hospital
Loren William Avery —	Presbyterian Hospital
Fuller Byran Bailey —	Washington Boulevard Hospital and Cook County Hospital
Fuller Byran Bailey	Washington Boulevard Hospital
Hulburt Enos Bardenwerper	Passavant Memorial Hospital
Clarence Albert Barnes —	St. Joseph's Hospital
Joseph Levi Benton —	Illinois Central Hospital
Maxwell Philip Borovsky	U.S. Marine Hospital and Cook County Hospital
John William Brennan	
Nicholas Louis Campione	Cook County Hospital
Jose Gonzales Carrillo	
Charles Hardy Carroll	Wesley Memorial Hospital
Seymour Jerome Cohen	
Jay Jarvis Crane	Michael Reese Hospital
Henry Duiker —	St. Luke's Hospital
Loyd Lewis Edmisten	Henrotin Hospital
Ivan Raleigh Egbert	Grant Hospital

Charles Judson Eldridge	Presbyterian Hospital
Arthur Thomas Farisy -	
Samuel Maurice Feinberg -	Cook County Hospital
Clarence George Fischer -	Presbyterian Hospital and Cook County Hospital
Hugh Frederick Freidell -	Presbyterian Hospital
Richard Cotter Gamble	Cook County Hospital
John Henry Gernon	Evanston and Cook County Hospitals
Harrison Milton Gibson -	
Horace Ensign Groom -	Presbyterian Hospital
Benjamin Franklin Gumbiner	St. Louis City Hospital, St. Louis, Mo.
Aldace Walker Hammond -	Washington Boulevard Hospital
George Washington Hogeboom	Cook County Hospital
Blair Holcomb -	
Alice Mary Hunter -	Cincinnati General Hospital
Harry Julius Isaacs	U.S. Marine Hospital and Cook County Hospital
Conrad Heber Jenson -	St. Luke's Hospital
Broer Rollo Johnson	St. Luke's Hospital
Thomas David Jones -	St. Luke's Hospital
Sidney Richard Kaliski	Cook County Hospital
Lee H. Kiel	Cook County Hospital
William Earl Kiley -	Children's Memorial Hospital
Allan Bruce King	Wesley Memorial Hospital
Grant Harold Lanphere -	Presbyterian Hospital
Ernest Eric Larson	St. Joseph's Hospital
Harry Barney Levey -	
Martin Carl Lindem -	Presbyterian Hospital
John Silas Lundy -	Harper Hospital, Detroit, Mich.
Clarence William Magaret	
William Raymond Meeker	Cook County Hospital
Karl Magnus Nelson	
William Donald Nickelsen	
Joseph Reno Numbers, Jr.	
Halford E. Patton	
Harold Edward Phillips	
Josephine Elizabeth Platt	Los Angeles County Hospital, Los Angeles, Cal.
Peter Heije Poppens	Presbyterian Hospital
Henry James Profant	Cook County Hospital
Edward Carlisle Rainey -	St. Francis Hospital, Wichita, Kans.
Howard William Reed -	Akron City Hospital, Akron, Ohio
Roscoe Hulen Reeve	Passavant Memorial Hospital
Isadore Sandock	St. Louis City Hospital, St. Louis, Mo.
Ethel R. Schlesinger	Los Angeles County Hospital, Los Angeles, Cal.
Carl Emil Schultz	
Albert Larson Severeide -	Presbyterian Hospital

Hal Wilberforce Sherman -	
Clarence C. Smith	Miami Valley Hospital, Dayton, Ohio
Robert Hitz Stanton	Children's Memorial Hospital
Vito Antonio Delsolato Taglia	Columbus Hospital
John Joseph Theobald	Henrotin Hospital and Illinois Charitable Eye and Ear Infirmary
Raymond Charles Thompson -	Presbyterian Hospital
Ernest Elwood Tippin -	St. Francis Hospital, Wichita, Kans.
Ming Sing Tongs	St. Louis City Hospital, St. Louis, Mo.
Eugene Fagan Traut	Presbyterian Hospital
Warren Ernest Tupper -	Cook County Hospital
Otto Van der Velde -	Harper Hospital, Detroit, Mich.
Emil George Vrtiak	St. Louis City Hospital, St. Louis, Mo.
Henry Waltman Walters -	St. Luke's Hospital
Ralph Herbert Warden	Washington Boulevard Hospital
Philip Wade Whiteley	Cook County Hospital
Max Samuel Wien	Cook County Hospital
Chester Henry Williams	Cook County Hospital
Gerald Kelley Wooll	Alexian Brothers' Hospital

MATRICULATES FOR THE SESSION OF 1918-19

The following list includes only those students who were in attendance during one or more quarters, and who were entitled to take the quarterly examinations.

NOTE.—The naming of a degree not followed by the name of an institution in parentheses is understood to mean a degree conferred at the University of Chicago.

Where no institution is named, it is understood to mean that the student began his career as a Junior at the University of Chicago.

Where no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U.=University; C.=College; S.=School; Hs.=High School; A.=Academy; Sm.=Seminary; Inst.=Institute (or Institution).

PERIOD OF RESIDENCE.—*s*=Resident during Summer Quarter, 1918; *a*=Resident during Autumn Quarter, 1918; *w*=Resident during Winter Quarter, 1919; *sp*=Resident during Spring Quarter, 1919.

NOTE.—* indicates that the student was a member of the Enlisted Medical Reserve Corps; ** indicates the student was a member of the Students Army Training Corps; ‡ indicates that the student was a member of the Hospital Corps of the Naval Reserve Force; †† indicates the student was a member of the Naval Section of the Students Army Training Corps; many students in the M.E.R.C. failed of induction into the S.A.T.C., through no fault of their own; § Active Service.

FRESHMEN AND SOPHOMORES

- *Abramovitch, William Morris, *s*, Chicago. Ph.B. '14.
- **Abt, Arthur Frederick, *a, w, sp*, Chicago. S.B. '17.
- Allison, Minard, *s, a*, Pittsburg, Kan. A.B. (Denver U.) '17.
- Allison, Ernest Fridolph, *a, w, sp*, Jamestown, N.Y. Senior C.
- Ames, Florence Dorothea, *a, w, sp*, Fargo, N.D. A.B. (Fargo C.) '16.
- *Andersen, Walter Michael, *s*, Chicago. S.B. '18.
- *Anderson, Charles Edward, *s, a, w, sp*, Chicago. S.B. (Coe C.) '10.
- **Anthony, Stephen, *s, a, w*, Chicago. Technische Hochschule, Munich, '05.
- *Apfelbach, Carl Wesley, *w, sp*, Chicago. Junior C.
- *Asher, Arthur Graham, *s, w*, Trenton, Mo. S.B. '18.
- Ashland, Dorothy Madison, *sp*, Fargo, N.D. Senior C.
- Bachman, Mary Magdalen, *a, w, sp*, Alta, Ark. S.B. (Valparaiso U.) '17.
- *Bacon, Vinton Arthur, *a, w, sp*, Chicago. Senior C.
- *Baken, Melvin Palmer, *s, w*, Hayfield, Minn. A.B. (St. Olaf C.) '17.
- *Baldwin, Orville Lee, *a, w, sp*, Cridersville, Ohio. Junior C.
- *Barborka, Clifford Joseph, *s*, Denison, Iowa. S.B. '18.
- *Bargen, Jacob Arnold, *s, a, w*, Mountain Lake, Minn. S.B. '18.
- *Bassow, Solomon Herbert, *s*, Guernsey, Wyo. S.B. '18.
- **Baumgartner, George John, *a, w, s*, Forest Park. Lewis Inst.
- Bay, Emmet Blackburn, *a, w, sp*, Chicago. Senior C.
- §Becker, Harry Fred, *w, sp*, Chicago. Senior C.
- Bell, Margaret, *s*, Chicago. S.B. '15.
- *Bercovitz, Zacharias, *s, a*, Los Angeles, Cal. Junior C.
- *Best, Gordon Newall, *s, a, w*, Watertown, S.D. S.B. (Carleton C.) '17.
- *Biggs, Alfred DeBard, *s, a, w*, Riverton, Ky. A.B. (Maryville C.) '15.
- *Billings, William Wyatt, *s*, Liberty, Mo. S.B. '18.

- *Black, Gardner, *s, a, w, sp*, Pasadena, Cal. S.B. '18.
Bodmer, Stella Mason, *sp*, LaGrande, Ore. Senior C.
- *Bondzinski, John Anton, *s, w*, Chicago. S.B. '18.
Boyd, John Ellison, *a, w*, Chicago. A.B. (Queen's C.) '08.
- *Brandes, Leo, *a, w, sp*, Chicago. S.B. '18.
- *Brockway, Alvia, *s, a, w*, Reno, Nev. S.B. '19.
- †Brown, Clarence Frank Gunsaulus, *s, a, w, sp*, Chicago. Senior C.
- *Browning, Irving Robert, *s*, Iron Mountain, Mich. S.B. (Michigan Agricultural C.) '12.
- †Bruff, William Cortland, *s*, Atlantic, Iowa. S.B. '18.
- *Buchbinder, William Charles, *s, a, w, sp*, Chicago. S.B. '19.
- *Burns, Dean Carl, *a, w, sp*, Petosky, Mich. Senior C.
- *Butin, James Abram, *s*, Fredonia, Kan. A.B. (U. of Kansas) '16.
- *Butterman, Albert, *a, w, sp*, Chicago. Senior C.
Caldwell, George Thomas, *a, w*, Columbus, Ohio. Ph.D. '18.
Callis, Henry Arthur, *w, sp*, Chicago. A.B. (Cornell U.) '09.
- §Cameron, Don Bruce, *w, sp*, White Pigeon, Mich. S.B. '17.
- **Campbell, Orwood Jackson, *a, w, sp*, Peoria. Senior C.
Carey, Earl Stafford, *a, w, sp*, Chicago. Senior C.
Carey, Eben James, *s*, Los Angeles, Cal. S.B. (Creighton C.) '16.
Cary, William Ernest, *a*, Chicago. Ph.D. '16.
Castaing, Pedro Alvaro, *sp*, Ponce, P.R. Senior C.
- **Cirlin, Marcus Bernarr, *s, a*, New York City. Senior C.
Clauser, Clarence Francis, *sp*, Bridgewater, S.D. Senior C.
- §Clowes, Leo Clifford, *sp*, Centralia. A.B. (Illinois C.) '12.
Cobb, Marion Emorette, *sp*, Wheaton. Senior C.
Cohen, Henry David, *s, a*, Chicago. S.B. '18.
Cohn, Nathan, *sp*, Chicago. Senior C.
- *Collett, George Arthur, *s, a, w, sp*, Ottawa, Kan. S.B. (Ottawa U.) '13.
- *Collins, Everett Naughton, *a, w, sp*, Fernville, Mich. Senior C.
- *Collins, Kenneth Heath, *a, w*, Moscow, Ida. Senior C.
- *Colwell, Arthur Ralph, *a, w, sp*, Chicago. Senior C.
- §Crooks, Tony Taylor, *s*, Fredonia, Kan. A.B. (Oxford U., England) '13.
Crowe, Stanley Maxwell, *sp*, Charleston. Senior C.
- *Cryst, James Henry, *a, w, sp*, East Ely, Nev. Senior C.
- †Curry, James Francis, *s, a, w*, Topeka, Kan. A.B. (Washburn C.) '17.
- *Curtis, George Morris, *s*, Dexter, Mich. Ph.D. (U. of Michigan) '14.
- ††Dabbs, Howard Burtneil, *s, w, sp*, Ft. Worth, Tex. A.M. (Texas Christian C.) '11.
- *Daniels, Luman Elmer, *s, w*, Woodstock. S.B. '19.
Davis, David Harold, *sp*, Chicago. Senior C.
- **Dawson, William Artis, *a, w, sp*, Dalhart, Tex. Senior C.
- **deBere, Clement Joseph, *s, w, sp*, Chicago. Ph.B. (C. of Brussels, Belgium).
- **DeGroat, Albert, *a, w, sp*, Chicago. Senior C.
- *Donald, Ernest, *s*, Chicago. Senior C.
- *Douglas, Bruce Hutchinson, *s*, Whittier, Cal. A.B. (Whittier C.) '15.
Earle, Walter Clarence, *s*, DesPlaines. S.B. '18.
Ehrmann, Evelina Wilhelmina, *s*, LaGrange. S.B. '17.

- Eisendrath, Elsa B., *a, w, sp*, Chicago. Ph.B. '18.
- *Ellis, Harold Oliver, *s, a, w, sp*, Sioux City, Iowa. Senior C.
- *Emmert, Frederick Victor, *a, w*, Avoca, Iowa. Junior C.
- **Endriz, Frank Louis, *a, w*, Chicago. Senior C.
- Erickson, Oscar Charles John, *s, a, w*, Chicago. S.B. '19.
- Enos, Grace, *sp*, Jerseyville. Senior C.
- Fanson, Anna Ethel, *s, a, w*, Assumption. A.B. (Maryville C.) '13.
- *Feild, Marshall William, *a, w, sp*, Peoria. Senior C.
- Files, Edward Hasty, *sp*, Cedar Rapids, Iowa. Senior C.
- Fineberg, Isadore, *s, a, w, sp*, St. Paul, Minn. Senior C.
- *Fogelson, Samuel Julian, *a, w, sp*, Chicago. Senior C.
- **Friend, Oscar Falker, *a, w*, Chicago. Senior C.
- Fujimaki, Samuel Yoshitomo, *a*, Kanoiwa, Japan. S.B. '18.
- Foley, Edmund Francis, *s*, Chicago. Senior C.
- Foster, Wilmot Coyne, *s*, Portland, Ore. A.B. (U. of Oregon) '16.
- *Gabler, Anthony Jacob, *a*, Chicago. Senior C.
- Gambec, Louis Phares, *s*, Portland, Ore. Oregon Agric. C.
- *Garner, Jay McKinley, *a, w, sp*, Wichita, Kan. S.B. '16.
- *Garrison, Lester Edward, *a, w, sp*, Chicago. Senior C.
- *Gaston, John Zell, *a, w, sp*, Houston, Tex. Senior C.
- Geiger, Sara Gertrude, *sp*, Carthage. A.B. (State U. of Colorado) '14.
- Gerard, Ralph Waldo, *a, w, sp*, Chicago. S.B. '19.
- Gibson, Carl Chesney, *a, w, sp*, Chicago. A.M. (Columbia U.) '13.
- Gidley, William Francis, *s*, West Lafayette, Ind. S.B. (U. of Michigan) '08.
- *Goodwin, Joshua Samuel, *a, w, sp*, Chicago. Senior C.
- Goodyear, Lawrence Myres, *a, w, sp*, Watseka. Senior C.
- *Graber, Benjamin Peter, *a, w*, Freeman, S.D. S.B. '18.
- **Graber, Rex Edgar, *sp*, Freeman, S.D. Senior C.
- *Graham, Robert Hugh, *s*, Monmouth. S.B. (Monmouth C.) '15.
- **Greenstein, Earle Ira, *a, w, sp*, Chicago. Senior C.
- Greenstein, Max A., *a, w*, Chicago. S.B. '19.
- Grey, Dorothy, *a, w, sp*, Evanston. S.B. '14.
- *Griffith, Byron Sumner, *s, a, w, sp*, Ames, Iowa. Senior C.
- **Grinker, Roy, *a, w, sp*, Chicago. Senior C.
- Grogan, Robert Earl, *s*, Dallas, Tex. A.B. (Baylor U.) '16.
- Grossman, Harry Dewey, *s, a, w, sp*, Chicago. S.B. '19.
- **Hagens, Elmer William, *a, w, sp*, Chicago. Senior C.
- *Hallmann, Alfred Herman, *s*, Chicago. Senior C.
- Hamilton, Crete Jean, *a, w, sp*, Benton. Senior C.
- **Hamilton, Gerald Watson, *a, w*, New Plymouth, Idaho. Senior C.
- Hantsch, Ferdinand, *s, a, w, sp*, Chicago. Normal C. of Austria.
- *Harrington, Raymond James, *a, w, sp*, Sioux City, Iowa. A.B. (Morningside C.) '17.
- *Harris, Joseph Morris, *a, w, sp*, Los Angeles, Cal. Senior C.
- *Harris, Ralph Lee, *s, a, w, sp*, Dumont, Iowa. S.B. '18.
- Harrison, Jeanette, *a, w, sp*, Kankakee. Senior C.
- Hartman, William Walter, *a, w, sp*, Chicago. Senior C.
- *Heatherington, Jean Robert, *a, w, sp*, Bellaire, Ohio. Senior C.

- Heitman, Marjorie McCrary, *a, w, sp*, Wallace, Idaho. A.B. (Mills C.) '18.
- *Henderson, James Murray, *s, a, w*, Tarkio, Mo. S.B. (Tarkio C.) '16.
- *Henn, Samuel Chester, *s, a, w, sp*, Paonia, Colo. A.B. (Colorado C.) '17.
- Hertzfield, Morris Wolf, *a, w, sp*, Chicago. S.B. '18.
- **Hiss, Karl Louis, *sp*, Toledo, Ohio. Senior C.
- *Homme, Owen Halvor, *s, a*, Echo, Minn. A.B. (St. Olaf C.) '17.
- **Hooval, John Harold, *a, w, sp*, Madison, S.D. Senior C.
- *Householder, Raymund, *s, a, w*, Bloomington. S.B. '19.
- **Hoyt, Lee Turner, *a, w*, Good Hope. Senior C.
- *Hubbard, John Clark, *s*, Willard, Utah. S.B. '17.
- *Huckleberry, Evermont Robbins, *s, a, w, sp*, Graham, Tex. S.B. '18.
- Huml, Richard James, *sp*, Chicago. Senior C.
- Ingals, Mary Goodell, *s*, Chicago. S.B. '18.
- ††Inlow, Charles Frederic, *s, a, w, sp*, Manilla, Ind. Senior C.
- **Inlow, Herbert Haehl, *a, w, sp*, Manilla, Ind. Senior C.
- *Isaac, Arnold Gerhard, *a, w, sp*, Moundridge, Kan. A.B. (Bethel C.) '16.
- **Jaques, Lawrence, *a, w, sp*, Chicago. S.B. '19.
- †Johnson, Andrew Beaumont, *s, a, w, sp*, Columbus, Ohio. S.B. (Ohio State U.) '14.
- **Johnson, Carl Gilbert, *a, w, sp*, Marshalltown, Iowa. Senior C.
- Johnson, Frances, *w, sp*, Ireton, Iowa. A.B. (Iowa State U.) '13.
- *Johnson, Harold Edward, *a, w, sp*, Waterloo, Iowa. Senior C.
- *Johnson, Stanley Frederick, *w, sp*, Rockford. Senior C.
- *Jones, Durward Roscoe, *s*, LaCrosse, Ind. S.B. '17.
- †Jones, George Wilson, *a, w, sp*, Evanston. S.B. '18.
- *Jones, Scott S., *a, w, sp*, Marshalltown, Iowa. Senior C.
- Kaffesieder, Lewis I., *a, w, sp*, Gary, Ind. Senior C.
- *Kaplan, Emanuel Mandel, *s*, Chicago. S.B. '18.
- Kato, Katsuji, *sp*, Osaka, Japan. Ph.D. '13.
- **Kaufman, Irving E., *a, w, sp*, Chicago. Senior C.
- **Kaufman, Paul Myron, *sp*, Georgetown, Ohio. Senior C.
- Kirchner, Ralph Waldo, *sp*, Muncie, Ind. Senior C.
- *Keir, Floyd Earl, *s*, Elwood. S.B. '17.
- **Klitzke, John Louis, *a, w, sp*, Chicago. Senior C.
- ††Kneussl, Maximillian Bernard, *a, w, sp*, Ottawa. Senior C.
- Koucky, John Douglas, *s*, Ledgerwood, N.D. S.B. '18.
- §Krakauer, Gustave, *s*, Chicago. Senior C.
- *Krauss, Thomas Frederick, *a, w, sp*, Jonesboro. Senior C.
- Kristensen, William Ambrosius, *s*, Chicago. S.B. '18.
- *Landes, Herbert Ellis, *s, w, sp*, Greencastle, Ind. A.B. (DePauw U.) '17.
- **Larkowski, Tadensz Maryan, *a, w, sp*, Chicago. Senior C.
- **Larson, Ernest Oliver, *a, w, sp*, Chicago. Senior C.
- *Lashkowitz, Abe Fay, *a, w, sp*, Chicago. Senior C.
- *Lawrence, John Vincent, *s, a, w, sp*, Chicago. S.B. '17.
- *Lawson, Lawrence James, *a, w, sp*, Petersburg. Senior C.
- †Lawton, Stanley Edward, *a, w, sp*, Petersburg. Senior C.
- §Lederer, Francis Leopold, *s, w, sp*, Chicago. Senior C.
- **Leiter, Louis, *s, a, w, sp*, Chicago. Senior C.

- *Leonard, Joseph Michael, *a, w, sp*, Elkader, Iowa. Senior C.
 Lepke, Joseph Elmer, *s, a, w, sp*, Anaconda, Mont. Senior C.
 Lerner, Polly Maria, *s*, Minneapolis, Minn. Junior C.
 *Lerner, Samuel, *s, a, w, sp*, Chicago. Senior C.
 **Lev, Morris William, *a, w, sp*, Chicago. Senior C.
 **Levin, Benjamin Mordecai, *a, w, sp*, Chicago. Senior C.
 Levy, Julius, *a, w*, Chicago. S.B. '19.
 **Lewis, George Cecil, *a, w, sp*, Chicago. Senior C.
 **Lindenbaum, Joseph Moses, *a, w, sp*, Chicago. Senior C.
 Liu, Herman Chan En, *a, w, sp*, Hanyang, China. S.B. (Soochow U.) '18.
 Lorenz, Faun M., *a, w, sp*, Chicago. Ph.B. '12.
 **Lundvick, Cyril Vincent, *a, w, sp*, Gowrie, Iowa. Senior C.
 §McCarthy, Earl Roach, *w, sp*, Spokane, Wash. Senior C.
 McClanahan, Esther, *s, a, w, sp*, Columbus, Miss. S.B. (Mississippi Industrial Inst. and C.) '16.
 McGuire, Lena Blanche, *a, w, sp*, Chicago. Senior C.
 *McLoone, James Egan, *a, w, sp*, Chicago. Senior C.
 McNeal, Alice, *s, a, w*, Hinsdale. S.B. '18.
 Malan, Daniel Bartholomeus, *s, a, w, sp*, Wellington, South Africa. Senior C.
 *Mason, Edward Charles, *s*, St. Louis, Mo. A.B. (Drury C.) '14.
 †Masterton, Edward L., *a, w, sp*, Chicago. Senior C.
 *Mastousek, William Joseph, *s*, Colome, S.D. S.B. '18.
 Mead, Irene Tufts (Mrs.), *a, sp*, Chicago. A.B. '15.
 Mead, Myrogene, *sp*, Berthoud, Colo. S.B. '16.
 Meyer, William Herman, *a, sp*, Forreston. Senior C.
 Midnes, Mary, *a, w, sp*, Chicago. Senior C.
 Moffat, William McKie, *sp*, Ft. Wayne, Ind. A.B. (Lafayette C.) '15.
 *Moore, Carl Richard, *s, a, w, sp*, Chicago. Ph.D. '16.
 *Morrow, Alvin Reid, *s, a, w*, Chicago. S.B. '19.
 *Morrow, John Calvin Weir, *s, a, w*, Grand Island, Neb. A.B. (Tarkio C.) '10.
 *Moser, Rollin Henry, *s, a, w*, Aurora. S.B. '19.
 Mulliken, Oscar Dale, *sp*, Humbolt. Senior C.
 *Mulsow, Frederick William, *s, a, w*, Yates Center, Kan. Ph.D. '19.
 Murchie, John Talmadge, *s*, Tarkio, Mo. S.B. (Tarkio C.) '14.
 *Murray, Everett Elliott, *s*, Winfield, Kan. S.B. '17.
 **Muyskens, John Peter, *a, w, sp*, Alton, Iowa. A.B. (Hope C.) '18.
 Nadelhoffer, Luella Esther, *sp*, Downer's Grove. Senior C.
 Narmonta, Liudyta Phyllis, *a, w, sp*, Chicago. Senior C.
 Nelson, Esther Serida, *sp*, Manhattan, Kan. Senior C.
 *Niblack, Henry Clay, *s*, Marshfield, Mo. S.B. '17.
 *Nicholson, Frederic Max, *s, a, w, sp*, Chicago. S.B. '18.
 Nienhius, John Edward, *sp*, Oak Park. A.B. (Hope C.) '18.
 O'Bannon, Roscoe Paul, *s*, Buffalo, Mo. S.B. '17.
 Oberhelman, Harry Alvin, *s*, Randolph, Kan. S.B. (Northwestern C.) '16.
 *O'Connor, Edward Bernard, *s*, Tonawanda, N.Y. A.B. (Manhattan C.) '16;
 S.B. '16.
 *O'Connor, John Redmond, *a, w, sp*, Chicago. Senior C.
 *Olmsted, Harry Carson, *a, w, sp*, Spokane, Wash. Senior C.

- †Olson, Ernest, *a, w, sp*, Chicago. Senior C.
- *Ortlepp, Frank August, *a, w*, Coloma, Mich. Senior C.
- *Palmer, Paul Whitney, *s*, Columbus, Ohio. A.B. (Ohio State U.) '15.
- *Palmer, Walter Lincoln, *a, w, sp*, Castle Rock, Colo. S.B. '18.
- Papa, Joseph, M. A. *a, w, sp*, Chicago. Ph.B. '18.
- Parmelee, Jane Middleton, *sp*, Chicago. Senior C.
- Patton, Halford E., *a*, Chicago. S.B. '16.
- Perry, Ethel Belle, *w, sp*, Belfast, N.Y. A.B. (Mount Holyoke) '11.
- *Peterson, Melvin Bethuel, *a, w, sp*, Hollandale, Wis. A.B. (St. Olaf C.) '17.
- Pfunder, Malcolm Chester, *s*, Greenwood, Wis. S.B. '18.
- Pickett, Catherine Montgomery, *a, sp*, Maywood. Senior C.
- *Piper, Charles Henderson, *a, w, sp*, Chicago. Senior C.
- *Popovici, Joan Constantine, *a, w, sp*, Detroit, Mich. Senior C.
- *Potter, Wendell Abel, *s, a, w*, Waterman. Senior C.
- *Powers, Henry Robert, *s*, Emmetsburg, Iowa. A.B. (U. of Iowa) '15.
- Psota, Frank Joseph, *s*, Chicago. S.B. '17.
- Rawlins, Ora Anson, *s*, Aurora. A.M. (Columbia U.) '14.
- *Raymund, Bernard, *a, w, sp*, Columbus, Ohio. A.M. (Ohio State U.) '15.
- Rees, Maurice Holmes, *s*, Tarkio, Mo. Ph.D. '17.
- Retinger, Julius Maria, *a, w, sp*, Chicago. Ph.D. (U. of Leipzig) '13.
- Reynolds, Benjamin Johnson Chapman, *sp*, Paducah, Ky. Senior C.
- *Rich, Ciney, *s*, Birds. S.B. '18.
- Rider, Dean Loller, *sp*, Bushnell. Senior C.
- *Rieger, Julius, *a, w, sp*, Chicago. Senior C.
- Rislow, Helen, *a, w, sp*, Belvedere. Senior C.
- Rogers, Fred Terry, *s, a*, Henderson, Ky. A.M. (Baylor U.) '14.
- *Rosenblum, Aaron Abraham, *a, w*, Chicago. Senior C.
- *Rosene, Gordon, *a, w, sp*, Stromberg, Neb. A.B. (Grand Island C.) '16.
- *Rubin, Joseph Elmore, *s*, Chicago. Senior C.
- *Rudolph, Abraham Happy, *a, w, sp*, Chicago. S.B. '18.
- Russell, Cecil Kirke, *s*, Chicago. S.B. '18.
- Russell, Margaret, *sp*, Freeport. Senior C.
- St. Pierre, Edward Walter, *s*, Salem, Ore. Senior C.
- *Schaller, Clarence Henry, *s, a, w, sp*, Mendota. Senior C.
- **Schick, Andrew Daniel, *a, w, sp*, Chicago. Senior C.
- *Schiff, George, *a, w, sp*, Chicago. Senior C.
- Schroeder, Mary Geitzman (Mrs.), *s*, Chicago. A.B. (U. of Southern California) '17.
- *Schroeder, William Frederic, *a, w, sp*, Mountain Lake, Minn. A.B. (Carleton C.) '14.
- *Scott, Philip Albright, *a, w, sp*, Emmetsburg, Iowa. Senior C.
- *Serbin, William Benedict, *s*, Chicago. S.B. '18.
- Shaffer, Earl William, *sp*, Bridgeport. S.B. (Illinois C.) '16.
- Shanberg, Abraham H., *a, w, sp*, Chicago. Senior C.
- *Shapin, Henry Joseph, *a, w, sp*, Louisville, Ky. Senior C.
- Shapinsky, Theodore, *sp*, Chicago. Junior C.
- *Sheaff, Howard Martin, *s, a, w, sp*, Hastings, Neb. Ph.D. '19.
- *Shelley, Harold J., *s, a, w*, Elmsdale, Kan. A.B. (Kansas U.) '18,

- *Sherman, Mandel, *s*, Chicago. S.B. '18.
- *Silverman, Maurice, *s*, Chicago. Senior C.
- *Simonson, Irwin Dave, *s, a, w*, Buena Vista, Colo. Junior C.
- *Singer, Harry Albert, *a, w*, Chicago. S.B. '19.
- *Sluzynski, Leonard Stanley, *a, w, sp*, Chicago. S.B. '19.
- Smiley, William Allen, *w, sp*, Grinnell, Iowa. S.B. (Grinnell C.) '16.
- †Smith, Arthur Wilson, *a, w*, Richmond, Ind. S.B. '18.
- Smith, Laurel Irene, *a, w, sp*, Latham, Kan. Senior C.
- Smith, Matthew Thomas, *sp*, Chicago. Senior C.
- *Smith, Roy Esmond, *s*, Winchester, Kan. A.M. (U. of Kansas) '17.
- Sotirakos, Spiros D., *s*, Chicago. Senior C.
- *Spears, Clarence Wiley, *s, w*, Kewanee. S.B. (Dartmouth C.) '17.
- *Speier, Aaron Scholl, *a, w, sp*, Lincoln, Neb. Senior C.
- Sperl, Joseph Tours, *a, w, sp*, Chicago. A.B. (Pomona C) '16.
- *Spoonemann, Walter Herman, *s, a, w*, Chicago. S.B. '19.
- *Stanley, Deane Field, *a, w, sp*, Urbana. Senior C.
- *Staples, Harry Albert, *a, w, sp*, Princeton. Senior C.
- Stappenbeck, Paul Henry, *a, s, w, sp*, Manhattan. Junior C.
- Starr, Merritt Paul, *w, sp*, Chicago. A.B. (Howard C.) '15.
- Stegeman, Wilson, *a, w, sp*, Holland, Mich. Senior C.
- *Stein, Jules Caesar, *a, w, sp*, South Bend, Ind. Ph.B. '15.
- Stephens, Joseph Bryan, *a, w, sp*, Gary, Ind. Senior C.
- *Stephenson, Joseph Clark, *s*, Sheridan, Ind. S.B. '07.
- *Stieglitz, Edward Julius, *s, a, w, sp*, Chicago. S.B. '18.
- *Stone, Merlin J., *s*, Ogden, Utah. S.B. (Utah Agric. C.) '14.
- Tiffany, M. Neoskoleta, *a, w, sp*, Huntington, Pa. A.B. (Wheaton C.) '17.
- *Tobias, Milton, *a, w, sp*, Chicago. Senior C.
- Tower, Lucia Elizabeth, *sp*, Chicago. Senior C.
- Tucker, Beatrice Edna, *w*, Peoria. S.B. '18.
- Turner, Edgar Cleveland, *sp*, Cherokee, Iowa.
- *Val Dez, Frank Carl, *a, w, sp*, San Angelo, Tex. S.B. '19.
- *Van Dyke, Harry B., *s, a, w, sp*, Des Moines, Iowa. S.B. '18.
- *Vrtiak, Emil, *s*, Chicago. S.B. (U. of Illinois) '17.
- *Wallace, Hawthorn Collins, *a, w, sp*, Bellefontaine, Ohio. A.B. (Muskingum C.) '11.
- Wang, Suchen, *sp*, Chinkiang, China. S.B. '18.
- Ware, Julian Vivian, *s*, Chicago. S.B. '18.
- Weil, Beatrice, *sp*, Chicago. Ph.B. '18.
- *Weiland, Arthur Herman, *a, w, sp*, Ashton, S.D. S.B. (Carleton C.) '17.
- ††Welch, Albert Summerfield, *a, w, sp*, Kansas City, Mo. Senior C.
- Wells, Morris Miller, *a*, Chicago. Ph.D. (U. of Illinois) '15.
- *Wheeler, Daniel Wilbur, *s, a, w*, Watseka. S.B. (Knox C.) '15.
- *Whitney, Homer Higgs, *a, w, sp*, Fonda, Iowa. Senior C.
- Wiedemer, Lottie Becht, *sp*, Norwood, Ohio. A.B. (U. of Cincinnati) '13.
- Wilcox, Harry Slater, *sp*, Little Falls, N.Y. A.M. (Harvard U.) '11.
- *Wills, Irving, *s, w*, Watsonville, Cal. S.B. '18.
- *Wilmoth, Clifford Lee, *s*, Topeka, Kan. Senior C.
- Wilson, Margaret, *a, w, sp*, Chicago. A.B. (Wellesley C.) '17.

- Wilson, Myrta Mae, *sp*, Middleton, Ohio.
 *Wimmer, Robert Norris, *s*, Logansport, Ind. Senior C.
 *Winans, Leslie Haines, *s, a, w, sp*, Toulon. S.B. (Denison U.) '17.
 Wolf, Elizabeth Pauline, *w, sp*, Indianapolis, Ind. S.B. '18.
 *Woolfan, Emanuel Bertrans, *s, w*, Hibbing, Minn. S.B. '18.
 *Yancey, Charles Corbin, *a, w, sp*, Chicago. Senior C.
 **Yntema, Stuart, *a, w, sp*, Hudsonville, Mich. Senior C.
 *Yoder, Orus Ray, *s, a, w*, Goshen, Ind. A.B. (Goshen C.) '16.
 ‡Zaus, Earl Alfred, *a, w, sp*, Youngstown, Ohio. S.B. '19.
 §Zavertnik, John Joseph, *sp*, Chicago. Senior C.

MEN—274

WOMEN—41

TOTAL—315

SPECIAL STUDENTS TAKING MEDICAL COURSES

- Adams, Vera Hutchinson, *s, a, w*, Kewanee.
 Allen, Charles Ethan, *s*, Albany, N.Y. A.B. (Wabash C.) '14.
 Allen, Helen, *a, w*, Cincinnati, Ohio. A.B. (Vassar C.) '13.
 Allen, Samuel Leone, *w*, Minneapolis, Minn. A.B. (Bates C.) '12.
 Altman, Harry, *s, a, w*, Denver, Colo. A.B. (University of Denver) '17.
 Amadon, Roger Shirley, *s*, N. Fargo, N.D. Ohio State U.
 Ashman, Richard, *s*, Huntington, N.Y. (Litt. B. Rutgers C.) '15.
 Beck, Gerald Henderson, *s*, Omaha, Neb. U. of Nebraska.
 Beckstead, Francis Hamilton, *s*, Provo City, Utah. A.B. (Brigham Young U.) '15.
 Bell, Edith Helen, *a, w*, St. Charles.
 Binswanger, Herbert Frank, *a, w*, St. Joseph, Mo.
 Blount, Mary, *s*, Byron. Ph.D. '08.
 Bonar, Everett Twinem, *s*, Round Bottom, Ohio. S.B. (Ohio State U.) '18.
 Bowden, Everett, *a, w*, Brodhead, Wis. S.M. (U. of North Dakota) '18.
 Brandstadt, Wayne Glassburn, *s, a, w*, Oak Park.
 Brooke, Deane Francis, *s*, St. Paul, Minn. U. of North Dakota.
 Brooks, Lee Roy, *s*, Delta, Ala. Valparaiso U.
 Brown, Hilles Talley, *s*, Chicago. Northwestern Dental C.
 Brunk, Walter Christian, *s*, Elida, Ohio. Senior C.
 Buffington, Estella, *s*, Brooklyn, Iowa. S.B. (Iowa State C.) '16.
 Burns, McIntosh Marcus, *sp*, Atlanta, Georgia.
 Calene, John Lucian, *s*, Sylvan Grove, Kan. A.B. (U. of Kansas) '18.
 Callan, Patrick Lawrence, *s*, Milwaukee, Wis. Marquette U.
 Canter, Harry Ellis, *s*, Pittsburgh, Pa. U. of Pittsburgh.
 Case, Irene, *a*, Chicago. Ph.B. '16.
 Chalkley, Lyman, *a, w*, Lexington, Ky. U. of Kentucky.
 Charles, Grace Miriam, *s*, Chicago. Ph.D. '10.
 Charlton, Alice Grace, *s*, Milwaukee, Wis. A.M. (U. of Wisconsin) '17.
 Chin, Yan Cheong, *s, a, w*, Honolulu, P.I. Creighton U.
 Clark, Norman Ashwell, *s*, Edmonton, Can. Vermilion S. of Agriculture.
 Costa, Frank John, *a, w*, Tampa, Fla. Senior C.
 Cuddy, Thomas Hughes, *s*, Winnipeg, Can. Manitoba Medical C.

- Culbertson, Charles Carleton, *s, w*, Joliet. Joliet Junior C.
 Culpetter, Charles Washington, *s*, Wadley, Ala. S.M. (Alabama Polytech. Inst.) '15.
 Cummings, Margaret Eloise, *a, w*, Centreville, Mich. Senior C.
 Daniels, Mary Jane, *a, w*, Woodstock.
 Davis, Gordon Ernest, *s*, Lyndonville, Vt. A.B. (Oberlin C.) '17.
 Dietmeier, Homer Ray, *s*, Winslow. U. of Illinois.
 Downey, DeLoise Hubert, *s*, Columbus, Ohio. Oskaloosa C.
 Drace, Claude Garrison, *s*, Kennett, Mo. S.B. (Vanderbilt U.) '18.
 Dunn, Frank Lowell, *a, w*, Erie, Pa.
 Duthie, Rena Purvis, *s*, Pullman, Wash. S.B. (Washington State C.) '13.
 Dvorak, Joseph, *s*, Iowa City, Iowa. U. of Iowa.
 Edmunds, Charles Stover, *s*, Bangor, Me. U. of Maine.
 Eggert, Fred Otto Emil, *a, w*, Chicago.
 Eichelberger, Marietta, *s, a*, Columbus, Miss. S.B. (Mississippi C.) '12.
 Evans, Ralph Liggett, *w*, Texarkana, Ark. Senior C.
 Faust, Louis Sanders, *s*, Colorado Springs, Colo. Northwestern U.
 Ferry, Lily Martin, *s*, Louisville, Ky. S.B. '10.
 Field, Hazel Elizabeth, *s*, Monticello, Ind. S.M. '15.
 Files, Edward Hasty, *w*, Cedar Rapids, Iowa. Coe C.
 Fine, Marion, *a, w*, Chicago. Sen. College.
 Foster, Wilmot Goyne, *s*, Portland, Ore. A.B. (U. of Oregon) '16.
 Frank, Marion Gabriel, *s, a, w*, Chicago. S.B. '18.
 Franz, Winifred Henrietta, *s, a, w*, Chicago. Senior C.
 Furlong, Thomas Henry, *s*, Chicago. S.B. '01.
 Gaderer, Emmett Robert, *s, a, w*, Chicago. Lewis Inst.
 Gass, Lloyd D., *a*, San Francisco, Cal.
 Gates, John Ferdinand, *s*, Chicago. U. of Wisconsin.
 Geiger, Beatrice Jane, *s, a, w*, Oshkosh, Wis. State Normal S.
 Gidley, William Francis, *s*, West Lafayette, Ind. S.B. (U. of Michigan) '08.
 Gilkey, Harry Melvin, *s*, Richmond, Kan. Ottawa U.
 Goldstein, Ben Odley, *a, w*, Pittsburgh, Pa. U. of Pittsburgh.
 Goltman, Alfred Meyer, *s*, Memphis, Tenn. Haverford C.
 Good, Donald Cameron, *s*, Hiawatha, Kan. A.B. (U. of Kansas) '18.
 Green, Sister Mary Azaria, *s*, St. Paul, Minn. S.M. '18.
 Green, Samuel Raymond, *a, w*, Chicago.
 Grosh, Pearl Marie, *a*, Nappanee, Ind. A.B. (Manchester C., Ind.) '11.
 Hahn, Mary Louise, *s, w*, Dwight. S.B. '18.
 Ham, Coyt, *s*, Lake City, S.C. Medical C. of South Carolina.
 Hanke, Martin Charles Edward, *s, a, w*, Chicago. S.B. '18.
 Hartmann, Emily Margaret, *a, w*, Chicago. Senior C.
 Hawk, Grover Cleveland, *a, w*, Oskaloosa, Iowa. S.B. (Penn. C.) '09.
 Henikoff, Leo Merrill, *s*, Chicago. Northwestern Medical S.
 Henriquez, Gil Agustin, *a*, Madrid, Spain. Valparaiso U.
 Henry, Lucy Dell, *a, w*, Bourbon. Frances Shimer S.
 Herrick, Ruth, *s, a*, Chicago. Senior C.
 Heyboer, Gabriel J., *s*, Chicago. Northwestern Dental S.
 Hinman, Walker McConnell, *w*, Dundee. U. of Illinois.

- Hinrichs, Marie Agnes, *a, w*, Chicago. A.B. (Lake Forest C.) '17.
Hoyer, Hans, *s*, Milwaukee, Wis. Northwestern C.
Hunderman, Henry D., *s*, Grand Rapids, Mich. A.B. (U. of Michigan) '16.
Ishikawa, Jinichiro, *s, a, w*, Tokyo, Japan. Kumamoto Medical C.
Jackson, James William, *s*, Broad Ripple, Ind. M.D. (Indiana U.) '10.
Jenkins, Charles Rees, *s*, Charleston, S.C. Johns Hopkins U.
Jenkins, John Laurie, *s, a, w*, Omaha, Neb. U. of Nebraska.
Johnson, Alma Cecelia, *s, a, w*, Madrid, Iowa. Valparaiso U.
Johnson, Ethel Margaret, *a, w*, Chicago. Senior C.
Johnson, Lester, *s*, Chicago. Lincoln Preparatory S.
Johnson, Percy Franklin, *a*, Colorado Springs, Colo. Colorado C.
Johnson, Sydney Evans, *s*, Chicago. Ph.D. (Northwestern U.) '16.
Jones, Barclay Lincoln, *s*, Westtown, Pa. Ph.B. (Brown U.) '16.
Kaplan, Bertha, *s*, Chicago. S.B. '16.
Kasten, Harry Edward, *s*, Juneau, Wis. S.B. (U. of Wisconsin) '18.
Kenney, Francis Paul, *s*, Dravosburg, Pa. Johns Hopkins Med. U.
Kingdon, Leigh Alfred, *a, w*, Galva. U. of Rochester.
Klawans, Harold Leo, *a, w*, Chicago. Senior C.
Kloster, Grant Melvin, *s, a, w*, Forest City, Iowa. Senior C.
Koch, Helen Lois, *a, sp*, Blue Island. Ph.B. '18.
Kramer, Rose Frances, *a, w*, Chicago. Rockford C.
Kranz, Aletha Dora, *s, a, w*, Ottumwa, Iowa. Lake Forest C.
Kraus, Ida, *a, w*, Chicago. S.B. '18.
Kuchler, Frank George, Jr., *a, w*, Chicago.
Larkin, William James, *s*, Whitewater, Wis. U. of Wisconsin.
Leff, Charles Oscar, *a, w*, Chicago.
Leszczynski, Jeannette Marie, *a*, Chicago.
Leutscher, Lyda May, *s, a, w*, Antigo, Wis. Milwaukee-Downer C.
Leventhal, Reuben Leo, *a*, Chicago.
Lew, Jacob, *s*, New Orleans, La. U. of Alabama.
Liang, Yat Kwan, *s, a, w*, Samshui City, Kwangtung, South China. Mount Holyoke C.
Loomis, Clifford Carlton, *s*, Chicago. U. of Illinois Dental C.
Ludolph, John Michael, Jr., *a, w*, Chicago.
Leutmer, Wendelin, *s*, Collegeville, Minn. St. Johns U.
Luh, Chih Wei, *s, a, w*, Nashville, Tenn. A.B. (Soochow U.) '13.
Lui, Sik Chew, *s, a, w*, Honolulu, Hawaii. U. of Illinois.
Mahone, Lionel Atticus, *s*, Anniston, Ala. Talladega C.
Malott, Ralph Justin, *s*, Chicago. Northwestern Med. S.
Martin, Kirby Armstrong, *s*, Hamilton, N.D. U. of North Dakota.
May, Frederick Tracy, Jr., *a, w*, Beardstown.
McCartney, James Lincoln, *s, a, w*, Chung King, West China. Ohio Wesleyan U.
McCracken, Robert Franklin, *s*, Richmond, Va. A.M. (Columbia U.) '10.
McCracken, Samuel Rea, *s*, Smithville, Mo.
McKie, Mildred Winnefried, *a, w*, Northboro, Iowa. S.B. (Tarkio C.) '18.
McLellan, Allan, *s*, Chicago. Ill. Wesleyan U.
Mead, Myrogene, *s, w*, Berthoud, Colo. S.B. (U. of Chicago) '16.
Miller, Clara, *s, a, w*, Chicago. Ph.B. '06.

- Miller, George Elmer, *s, a, w*, Sterling, Kan. S.M. (U. of Wooster) '11.
- Mohr, Edna Lillian, *s, a, w*, Buffalo, N.D. Macalester C.
- Montgomery, John Andrew, *s*, Ardoch, N.D. S.M. '13.
- Nagle, Ethel Harris, *s*, Kansas City, Mo. U. of Wisconsin.
- Neher, Edwin Manson, *a, w*, Chicago. S.B. '03.
- Neufield, Leo, *s*, Detroit, Mich. U. of Michigan.
- Newburger, Bernhard, Jr., *s*, Lexington, Ky. U. of Missouri.
- Nicholson, George Price, *s*, Willard, Ohio. S.B. (Ohio Wesleyan U.) '14.
- Noble, Ruth Burgit, *a*, Burlington, Wis. Whitewater State Normal S.
- Norman, Edith Emile, *s, a*, Peotone. S.B. '18.
- Ogilvie, Orin Author, *s*, Richfield, Utah. A.B. (U. of Utah) '18.
- Onserud, Helen Andrine, *a, w*, Spokane, Wash. Leland Stanford Junior U.
- Pack, Dean Alvin, *a, w*, Salt Lake City, Utah. A.B. (U. of Utah) '16.
- Palmieri, Italo A., *s*, New York, N.Y. Columbia U.
- Parson, Lester Raymond, *s*, Grand Forks, N.D. U. of North Dakota.
- Patterson, Thomas Leon, *s*, Kingston, Ontario, Can. S.M. '15.
- Penn, Helen Gertrude, *a, w*, Kahoka, Mo. Missouri U.
- Phillips, Albert Duane, *s*, Ft. Madison, Iowa. State U. of Iowa.
- Pond, Lee Wah, *s*, Hungkhan, Canton, China. S.B. (Iowa State C.) '18.
- Poppens, Peter Heije, *s*, Tea, S.D. S.B. '17.
- Potter, Jessie Edna, *s, a*, Thompsonville, Mich. S.B. '15.
- Price, Genevieve, *a, w*, Chicago. Oberlin C.
- Range, Irving, *s*, Buffalo, N.Y. Yale U.
- Raymond, Paul Alfred, *a*, Worcester, Mass. Colgate U.
- Rechsteiner, Harold Edward, *s*, Lowell, Ohio. A.B. (Marietta C.) '18.
- Rechsteiner, Walter Raymond, *s*, Lowell, Ohio. A.B. (Marietta C.) '18.
- Remmert, Arthur Theodore George, *a, w*, Mt. Olive.
- Richardson, Alex Porter, *sp*, Chicago.
- Robbins, Harriet Louisa, *a, w*, Payson. S.B. (Knox C.) '12.
- Roberts, Raymond Reid, *s*, Lawrenceville, Ga. Emory U.
- Rogers, Raymond Alward, *s*, Columbus, Ohio. S.B. (Ohio State U.) '11.
- Russell, Cecil Kirke, *s*, Decatur. Illinois State Normal U.
- Sawyer, Mary Virginia, *s*, Lawton, Okla. A.B. (U. of Oklahoma) '14.
- Schaefer, Waldo, *s*, Chicago. Northwestern U.
- Schmidt, Herbert Glueck, *s*, Milwaukee, Wis. U. of Wisconsin.
- Schmidt, Herbert Julius, *s*, Chicago. U. of Illinois.
- Scott, Edith, *a*, Harrisburg. U. of Illinois.
- Sedzials, Francis, *sp*, Winnipeg, Can. Manitoba Medical C.
- Sheppard, Hubert, *s*, Chicago. A.M. (Oklahoma U.) '17.
- Sheridan, Joyce Ten Eyck, *s*, Evanston. Northwestern U.
- Shiple, Valentine, *s*, Walbridge, Ohio. Senior C.
- Simmons, Eugene Earl, *s*, Omaha, Neb. U. of Nebraska.
- Slate, Francese Louise, *a, w*, Goshen, Ind. Goshen C.
- Slye, Maud, *a*, Chicago. A.B. (Brown U.) '99.
- Smith, Gailord Ewan, *s*, Florence, Kan. S.B. (Ed. Kansas State Normal) '17.
- Smith, Isabel S., *s*, Jacksonville. S.M. '05.
- Springer, James Earl, *sp*, Akron, Ohio.
- Stannard, Meigs Conkling, *s*, Columbia, S.C. A.B. (U. of South Carolina) '16.

Steele, Caroline Mae, *a*, Berlin, N.D. Valparaiso U.
 Stockholm, Mabel, *a, w*, Oakland, Cal. A.B. (Mills C.) '18.
 Swickard, William M., *a, w*, Newman. U. of Illinois.
 Swoboda, Friedrick Karl, *s, a, w*, Vienna, Austria. S.B. '18.
 Tholens, Margaret, *s*, Rochester, N.Y. A.B. (Wellesley C.) '12.
 Thomas, Newton George, *s*, Oak Park. A.M. (Central U.) '16.
 Thompson, Howard King, *s*, Boston, Mass. A.B. (Colgate) '16.
 Thompson, Roland Louis, *s*, Elroy, Wis. U. of Wisconsin.
 Tsiang, Kuen, *a, w*, Kinchwa City, China. Hangchow Medical C.
 Upton, Margaret Frances, *s*, Providence, R.I. A.M. (Brown U.) '14.
 Walsh, Mary Dunne, *s*, Baltimore, Md. Hopkins U.
 Walvoord, James Henry, *s*, Holland, Neb. U. of Nebraska.
 Wang, Suchen, *s, a, w*, Chinkiang, China. S.B. (U. of Chicago) '18.
 Waterston, John Gordon, *a, w*, Chicago. Queen's U.
 Weiss, Abram, *s*, Macon, Ga. Emory U.
 Welker, Joseph Edward, *s*, Lawrence, Kan. M.S. (Harvard U.) '14.
 Westerschulte, Richard Henry, *a, w*, Chicago. Lewis Inst.
 White, Ernest Harl, *s*, North Little Rock, Ark. S.M. (U. of Chicago) '15.
 White, Virginia Batie, *a, w*, Montgomery City, Mo. U. of Missouri.
 Williams, Gertrude, *a, w*, Oberlin, Ohio. A.B. (Oberlin C.) '18.
 Wilson, Myrta Mae, *a, w*, West Middletown, Ohio. Ohio Wesleyan U.
 Woolsey, Carrie Imogene, *s*, Tulsa, Okla. A.M. (U. of Kansas) '15.
 Wu, Ching-Cheng, *sp*, Chinese Legation, Washington, D.C.
 Zehetner, Arther William, *s*, Dubuque, Iowa. S.B. (U. of Pennsylvania) '12.

MEN—136

WOMEN—61

TOTAL—197

SPECIAL STUDENTS TAKING CLINICAL COURSES

Anderson, Howard C., *s*, Fargo, N.D.
 Antonelli, Rocco Marcus, *sp, s*, Youngstown, Ohio. A.B. (Oxford) '13.
 Burns, Robert E., *s*, Madison Wis.
 Carter, W. M., *s*, Bowbells, N.D.
 Pearlman, Isaacs, *sp*, Winnipeg, Manitoba, Can.
 Robison, Arnold Edgar, *sp*, Provo, Utah.

MEN—6

WOMEN—0

TOTAL—6

JUNIORS

Algeo, Murla, *s*, Columbia, Mo. S.B. (U. of Missouri) '15.
 Allison, Minard, *a, w, sp*, Pittsburg, Kan. S.B. '18.
 **Andersen, Walter Michael, *a, w, sp*, Chicago. S.B. '18.
 Anderson, Janet Alice, *s, a, w*, LaCrosse, Wis. S.B. '18.
 Anthony, Stephen Pantelis, *sp*, Washington, D.C. Technische Hochschule,
 Munich '05.
 **Asher, Arthur Graham, *a, sp*, Trenton, Mo. S.B. '18.

- **Aylward, Thomas James, *a, w, sp*, Green Bay, Wis. S.B. (U. of Wisconsin) '18.
 *Baken, Melvin Palmer, *sp*, Hayfield, Minn. A.B. (St. Olaf C.) '17.
 *Baker, Robert V., *a*, Portland, Ore.
 **Barborka, Clifford Joseph, *a, w, sp*, Denison, Iowa. S.B. '18.
 *Bargen, Jacob Arnold, *sp*, Mountain Lake, Minn. Carleton C.
 ††Barker, Samuel Robert, *w, sp*, Springfield. S.B. '18.
 **Bates, Austin David, *a, w, sp*, Scottville, Mich. S.B. '18.
 Bell, Margaret, *a, w, sp*, Chicago. S.B. '18.
 *Best, Gordon Newall, *sp*, Watertown, S.D. S.B. (Carleton C.) '17.
 **Billings, William Wyott, *a, w, sp*, Liberty, Mo. S.B. '18.
 **Blaisdell, Paul Carrier, *a, w, sp*, Claremont, Cal. A.B. (Pomona C.) '16.
 **Blakey, Adam Roy, *a, w, sp*, Estherville, Iowa. A.B. (U. of Minnesota) '09.
 **Bondzinski, John Anton, *a, w*, Chicago. S.B. '18.
 **Borchers, William Frederick, *s, a*, Chicago. S.B. '18.
 **Bowling, Irwin Ellis, *a, w*, St. Cloud, Minn. S.B. '18.
 **Brennan, Joseph Patrick, *a, w, sp*, Butte, Mont. S.B. (U. of Wisconsin) '18.
 **Browning, Irving Robert, *s, a, w*, Iron Mountain, Mich. S.B. '18.
 Bruff, William Cortland, *sp*, Atlanta, Iowa. S.B. '18.
 **Butin, James Abram, *s, a, w*, Fredonia, Kan. A.B. (U. of Kansas) '16.
 **Calene, John Lucian, *a, w*, Sylvan Grove, Kan. A.B. (U. of Kansas) '18.
 Cantwell, Roger Clifton, *a, w, sp*, Shawano, Wis. S.B. (U. of Wisconsin) '18.
 Cary, William Ernest, *s, a, w, sp*, Chicago. S.B. '12, Ph.D. '16.
 **Chang, Wah Kai, *a, w, sp*, Honolulu, T.H. S.B. '17.
 ††Clements, Fred, *a*, Mount Vernon, Ind. S.B. '18.
 **Cohen, Henry David, *a, w, sp*, Chicago. S.B. '18.
 **Cotts, Gerritt, *a, w, sp*, Hudsonville, Mich. S.B. '18.
 **Counsellor, Virgil Elias Sheetz, *s, a*, Lima, Ohio.
 *Crowder, Roy Elwin, *a, w, sp*, Elk Point, S.D. A.B. (U. of South Dakota) '18.
 †Curry, James Francis, *sp*, Topeka, Kan. A.B. (Washburn C.) '17.
 *Curtis, George Morris, *a, w, sp*, Nashville, Tenn. A.B., A.M., Ph.D., (U of Michigan).
 **Daniels, Luman Elmer, *a, sp*, Woodstock.
 **Diederich, Otto Peter, *a, w, sp*, Madison, Wis. S.B. (U. of Wisconsin) '18.
 **Douglas, Bruce Hutchinson, *s, a, w*, Whittier, Cal. A.B. '18.
 ††Earle, Walter Clarence, *a, w, sp*, Des Plaines. S.B. '18.
 **Eastman, Verne Everett, *s, a, w, sp*, Vermilion, S.D. A.B. (U. of South Dakota) '18.
 Ehrmann, Evelina Wilhelmina, *a, w, sp*, La Grange.
 Ericksen, Oscar John, *a, w, sp*, Sioux Falls, S.D. S.B. '19.
 **Eversoll, Norton John, *a, w, sp*, Cassville, Wis. S.B. (U. of Wisconsin) '18.
 **Eyerly, James Bryan, *s, a, w, sp*, North Loup, Neb. S.B. (U. of Nebraska) '18.
 **Eymundson, Kristbjom Sigurdur, *a, w, sp*, Pembina, N.D. A.B. '16.
 Fanson, Anna Ethel, *sp*, Assumption. A.B. (Maryville C.) '13.
 **Feuerstein, Fred, *a, w, sp*, Chicago. S.B. '18.
 *Fink, Emanuel B., *s*, Chicago. S.B. '13.

- **Fink, Harry William *a, w, sp*, Chicago. S.B. '18.
*Fitzgibbon, John Harold, *a, w, sp*, Portland, Ore. A.B. (U. of Oregon) '17.
**Foley, Edmund Francis, *a, w, sp*, Chicago. S.B. '18.
§Fowler, Harry Lester, Chicago. A.B. (Morningside) '16; A.M. (Jefferson C.) '18.
**Gallagher, William John, *s, a, sp*, Chicago. S.B. '18.
**Galloway, Charles Edwin, *a, sp*, Xenia, Ohio.
**Gambree, Louis Phaon, *s, a, w, sp*, Portland, Ore. A.B. (U. of Missouri) '18; S.B. (Oregon Agricultural C.) '14.
**Garlock, DeWitt Howard, *a, w*, Wells, Minn. S.B. '17.
*Garner, Jay McKinley, *sp*, Wichita, Kan. S.B. '16.
*Graber, Benjamin Peter, *sp*, Freeman, S.D. South Dakota State C.
**Graham, Robert Hugh, *s, a, w*, Monmouth. S.B. '18.
Grey, Anna Barbara, *a, w, sp*, Evanston. S.B. '17.
**Grogan, Robert Earl, *a, w, sp*, Dallas, Tex. A.B. (Baylor U.) '16.
**Guttman, Lydian Paul, *a, w, sp*, Kellnersville, Wis. S.B. (U. of Wisconsin) '18.
**Halbert, Howard Valmore, *a, w, sp*, Chicago.
**Hanson, Louis, *a, w, sp*, Marinette, Wis. S.B. (U. of Wisconsin) '18.
‡‡Hayes, Marshall Daniel, *a, w, sp*, Chicago. S.B. (U. of Illinois) '18.
‡‡Hefty, Paul Leo, *a, w, sp*, New Glarus, Wis. S.B. (U. of Wisconsin) '18.
**Hibbert, George Fielding, *a, w, sp*, Chicago. S.B. '18.
**Hofstra, Richard, *a, w, sp*, Chicago. S.B. '18.
Horrall, Onis Harrison, *a, w*, Cannelburg, Ind. A.B. (Indiana State Normal) '13.
**Houloose, James, *s, a*, Kalamazoo, Mich.
**House, Samuel John, *s, a, w, sp*, Franklin, Tenn. S.B. '18.
*Householder, Raymond, *sp*, Bloomington. S.B. '19.
**Howell, James Albert, *w, sp*, Grant City, Mo. S.B. (U. of Missouri) '18.
*Hoyt, Lee Turner, *sp*, Good Hope. S.B. '19.
**Hubbard, John Clark, *s, a, w*, Willard, Utah. S.B. '18.
**Huckleberry, Evermont Robbins, *a*, Chicago.
**Hunt, William Edwin, *a, w, sp*, Cleveland, Ohio. S.B. (U. of Wisconsin) '18.
Ingals, Mary Goodell, *a, w*, Chicago. S.B. '18.
**Irwin, George Howard, *a, w, sp*, Lodi, Wis. S.B. (U. of Wisconsin) '18.
**Ivy, Andrew Conway, *a, sp*, Cape Girardeau, Mo. S.B. '18
Jelinek, Joseph, *a, w, sp*, Chicago. S.B. (U. of Illinois) '18.
*Johnson, Arthur Elmer, *a, w, sp*, Portland, Ore.
**Jones, Durward Roscoe, *sp, s, w, sp*, LaCrosse, Ind. S.B. '17.
**Kahn, Julius, *s, a*, Chicago.
Kaplan, Emanuel Mandel, *a, w, sp*, Chicago. S.B. '18.
**Kasten, Harry Edward, *a, w, sp*, Juneau, Wis. S.B. (U. of Wisconsin) '18.
**Keir, Floyd Earl, *w, sp*, Elwood. S.B. '17.
**Kelly, Frank Brazzil, *a, w, sp*, Joliet. S.B. '18.
**Khanlian, Parsegh Benjamin, *a, w, sp*, Armenia. S.B. (U. of Wisconsin) '18.
**Knox, William Balmer, *a, w, sp*, Chicago. S.B., A.B., '18.
‡‡Koucky, John D., *s, a, w*, Lidgerwood, N.D. S.B. '18.
Kristensen, William Ambrosius, *a, w*, Chicago. S.B. '18.

- **Kyde, Magnus Wilkie, *a, w, sp*, Philip, S.D. A.B. (U. of South Dakota) '18.
- *Laing, Grant H., *a, w, sp*, Iron Mountain, Mich.
- **Langjahr, Arno Robert, *a, w, sp*, Plymouth, Wis. S.B. (U. of Wisconsin) '18.
- ††Langley, Robert William, *a, w, sp*, Portland, Ore. A.B. (U. of Oregon) '17.
- Levy, Julius, *sp*, Chicago. Senior C.
- *Lloyd, John Harold, *a, w, sp*, Academy, S.D. A.B. (U. of South Dakota) '18.
- McNally, William Duncan, *sp*, Chicago. A.B. (U. of Michigan) '05.
- *Manning, James Howard, *a, w, sp*, Bathgate, N.D. S.B. '18.
- **Mason, Edward Charles, *a, w, sp*, St. Louis, Mo. A.B. (Drury C.) '14.
- **Matousek, William Joseph, *a, w, sp*, Colome, S.D. S.B. '18.
- Melick, Clark Owen, *a, w, sp*, Chicago. S.B. (Ohio U.) '10.
- **Minthorn, Martin Lloyd, *s, a, w, sp*, Castana, Iowa. A.B. (U. of Nebraska) '17.
- Morrow, Alvin Reed, *sp*, Pittsburgh, Pa. S.B. '19.
- *Morrow, John C. W., *sp*, Blanchard, Iowa. A.B. (Tarkio C.) '10.
- Moser, Rollin Henry, *sp*, Aurora. S.B. '19.
- Mulsow, Frederick William, *a, w, sp*, Yates Center, Kan.
- Murchie, John Talmage, *s, w, sp*, Tarkio, Mo. S.B. '18.
- **Murray, Everett Elliott, *a, w, sp*, Winfield, Kan. S.B. '18.
- **Muskat, Irving Isidor, *a, w, sp*, Madison, Wis. S.B. (U. of Wisconsin) '18.
- **Niblack, Henry Clay, *a, w, sp*, Marshfield, Mo. S.B. '17.
- ††O'Bannon, Roscoe Paul, *s, a, w*, Miami, Okla. S.B. '18.
- **Oberhelman, Harry Alvin, *sp, s, a, w*, Randolph, Kan. S.B. '18.
- **Palmer, Clinton Foster, *a, w, sp*, Albert Lea, Minn.
- **Parmenter, Elbert Smith, *a, w, sp*, Lyndon. S.B. '18.
- **Petersen, Arthur S. J., *a, w, sp*, Racine, Wis. S.B. (U. of Wisconsin) '18.
- Pfunder, Malcolm C., *s, w*, Greenwood, Wis.
- **Pink, John James, *a, w, sp*, Oconomowoc, Wis. S.B. (U. of Wisconsin) '18.
- **Portis, Bernard, *a, w, sp*, Chicago. S.B. '18.
- **Portogallo, Henry Salvatore, *s, a*, Chicago.
- Raile, Henry, *a, w, sp*, Provo, Utah. S.B. '18.
- **Ratty, Frank John, *a, w, sp*, Laona, Wis.
- **Rawlins, Ora Anson, *s, a, w*, Streator. S.B., A.M., '18.
- Rees, Maurice Holmes, *s*, Tarkio, Ohio. Ph.D. '17.
- **Reichert, John Lester, *a, w, sp*, West Bend, Wis. S.B. (U. of Wisconsin) '17.
- **Rich, Ciney, *s, a, w*, Birds. S.B. '18.
- **Ruehl, Wilbur Herman, *a, w, sp*, Beaver Dam, Wis. S.B. (U. of Wisconsin) '18.
- **Rush, Floyd Harold, *a, w, sp*, Girard, Kan. S.B. '18.
- ††Russell, Cecil Kirke, *a, w, sp*, Chicago. S.B. '18.
- **Saunders, Otis Warren, *a, w, sp*, Oconto Falls, Wis. S.B. (U. of Wisconsin) '18.
- Scheffel, Yetta, *s, a, w*, Chicago. A.B., A.M., '07.
- **Schlosser, Herbert Carl, *a, w, sp*, Elkhart, Ind. S.B. '18.
- **Schmidt, Frederick Rehm, *a, w, sp*, Chicago. A.B. (Yale) '18.
- Schroeder, Mary Gritzner, *a, w, sp*, Chicago. A.B. (U. of Southern California) '17.
- §Seed, Lindon, *s, w, sp*, Minot, N.D. A.B. (U. of North Dakota) '18.

- **Seibel, Richard Alfred, *a, w, sp*, Hannibal, Mo. S.B. '18.
- **Serbin, William Benedict, *a, w, sp*, Chicago. S.B. '18.
- Shelley, Harold John, *sp*, Elmdale, Kan. A.B. (U. of Kansas) '18.
- **Sherman, Mandel, *a, w, sp*, Chicago. S.B. '18.
- **Singer, Harry Albert, *sp*, Chicago. Senior C.
- †Smith, Arthur Wilson, *sp*, Richmond, Ind. Senior C.
- **Smith, Roy Esmond, *a, w, sp*, Winchester, Kan. A.M. (U. of Kansas) '12; A.M. '17.
- **Spalding, Maurice, *a, w, sp*, Vincennes, Ind. S.B. '18.
- *Spears, Clarence Wiley, *sp*, Kewanee. S.B. (Dartmouth) '17.
- **Spoonemann, Walter Herman, *a, w, sp*, Chicago. S.B. '19.
- ††Stack, Sylvester Stephen, *a, w, sp*, Milwaukee, Wis. S.B. (U. of Wisconsin) '18.
- **Steckbauer, Joseph William, *a, w, sp*, Oshkosh, Wis.
- *Stein, Jules Caesar, *sp*, South Bend, Ind. Ph.D. '15.
- **St. Germain, Albert Leo, *sp, s, a*, Chicago. Northwestern U.
- *Stephenson, Joseph Clark, *a, w, sp*, Sheridan, Ind. S.B., Ph.D. '07.
- Stieglitz, Hedwig Jacobina, *s, a*, Chicago. S.B. '17.
- **Stone, Edward Jacob, *a, w, sp*, Chicago. S.B. '18.
- **Stone, Merlin J., *a, w*, Ogden, Utah. S.B. '18.
- St. Pierre, Edward Walter, *a, w, sp*, Salem, Ore. S.B. '14.
- ††Strause, Clifford Philip, *a, w, sp*, Peoria. S.B. '18.
- **Sutherland, George F., *s*, Grand Island, Neb. A.M., A.B. (U. of Illinois) '14; Ph.D. '17.
- **Swendson, James Jay, *a, w, sp*, Amherst, Wis.
- **Tartar, Nicholas Linn, *a, w, sp*, Corvallis, Ore. S.B. '18.
- Tomhagen, Edith Lommen, *a*, Chicago. A.B. (U. of Wisconsin) '12; S.M. '16.
- Tucker, Beatrice Edna, *sp*, Peoria. Bradley Polytechnic Inst.
- Van Dyke, H. B., *sp*, Des Moines, Iowa. Senior C.
- *Van Liere, Edward Jerald, *a, w, sp*, Bristol, Wis. A.B. '16, S.M. '17 (U. of Wisconsin).
- **Veatch, Harry John, *a, w, sp*, Weir City, Kan. S.B. (U. of Kansas) '18.
- **Veirs, Willard Lewis, *a, w, sp*, Urbana. A.B. (U. of Illinois) '17.
- Wagner, Carl Richard, *a, w, sp*, Chicago. A.B. (Yale) '18.
- Ware, Julian Vivian, *a, w, sp*, Chicago. S.B. '17.
- **Watkins, Richard Watkin, *a, w*, Granville, Ohio. S.B. '13.
- **Weinberg, Abraham Joseph, *s, a*, Chicago. S.B. '17.
- *Wheeler, Daniel Wilbur, *sp*, Watseka. S.B. (Knox C.) '15.
- White, Adeline Rawson, *a, w*, LaCrosse, Wis. S.B. '18.
- **Wills, Irving, *a, w, sp*, Watsonville, Cal. S.B. '18.
- **Wilmoth, Clifford Lee, *a, w, sp*, Topeka, Kan.
- **Wimmer, Robert Norris, *a, w, sp*, Logansport, Ind.
- Wolf, Elizabeth Pauline, *sp*, Indianapolis, Ind. Senior C.
- **Wolfan, Emanuel Bertrand, *a, w, sp*, Hibbing, Minn.
- Young, Roland Caldwell, *a, w, sp*, Vermilion, S.D. A.B. '18.

SENIORS

- **Allen, Edward Dudley, *a, w, sp*, Lo Lo, Mont. S.B. (U. of Montana) '15.
 *Allen, Isaac Walter, *s*, Salt Lake City, Utah. S.B. (U. of Utah) '15.
 Anderson, Janet Alice, *sp*, LaCrosse, Wis. S.B. '17.
 **Armen, George Kriker, *s, a, w*, Madison, Wis. S.B. (U. of Wisconsin) '17.
 Ascherman, Elmer Nathaniel, *s, a, w*, Chicago. S.B. '17.
 Austin, Florence Olive, *s*, Chicago. S.B. '17.
 *Avery, Loren William, *s, a*, Mitchell, S.D. A.B. (U. of South Dakota) '16.
 *Bailey, Fuller Bryan, *s, a*, Imperial, Neb. S.B. (U. of Nebraska) '17.
 ‡Balcar, Joseph Oliver, *s*, Chicago. S.B. (Coe C.) '13.
 ‡Bardenwerper, Hulbert Enos, *s, a*, Milwaukee, Wis. S.B. '17.
 Barnard, Hayden Emil Eberhardt, *s, a*, Chicago. S.B. '17.
 **Barnes, Clarence Albert, *s, a, w*, Albia, Iowa. A.B. (Monmouth C.) '14.
 **Bell, Robert Graham, *s, a, w, sp*, Chicago. A.B. (Wabash C.) '11.
 **Benton, Joseph Levi, *s, a, w*, Richland Center, Wis. S.B. (U. of Wisconsin) '17.
 **Bondzinski, John Anthony, *sp*, Chicago. S.B. '18.
 **Borchers, William Frederic, *w, sp*, Chicago. Northwestern U.
 Borovsky, Maxwell Philip, *s, a, w*, Chicago. S.B. '17.
 **Bosch, Leon Cherest, *s, a, w, sp*, Holland, Mich. A.B. (Hope C.) '15.
 *Bowler, Vincent Brendan, *s, a*, Chicago. S.B. '17.
 **Bradel, Thaddeus Leopold, *s, a, w, sp*, Chicago. S.B. '17.
 **Brennan, John William, *s, a, w*, Reynolds.
 **Browning, Irving Robert, *sp*, Iron Mountain, Mich. (Michigan Agricultural C.) '12.
 **Budge, Wallace Hugh, *s, a, w, sp*, Logan, Utah. S.B. '17.
 **Butin, James Abram, *sp*, Fredonia, Kan. A.B. (U. of Kansas) '16.
 Caldwell, George Thomas, *s, a, w, sp*, Columbus, Ohio. A.B. (Ohio State U.) '10; A.M. (*ibid.*) '13.
 **Campione, Nicholas Louis, *s, a*, Chicago. S.B. '17.
 Carino, Jose Maria, *s*, Baguio, P.I. S.B. '17.
 Carrillo, Jose Gonzalez, *a, w*, Baliwag, Bulacan, P.I. Senior C.
 Carroll, Charles Hardy, *s, a, w*, Provo, Utah. A.B. (Brigham Young U.) '12.
 ‡Clecak, Nicholas Jeffries, *s*, Oakland, Cal.
 ‡‡Clements, Fred, *w, sp*, Mount Vernon, Ind. S.B. '18.
 **Cohen, Seymour Jerome, *s, a, w*, Chicago. S.B. '17; S.M. '17.
 **Counseller, Virgil Elias Sheetz, *w, sp*, Lima, Ohio. S.B. '18.
 **Crane, Jay Jarvis, *s, a, w*, Hot Springs, S.D. S.B. '17.
 **Crowell, Dean P., *s, a, w, sp*, Albany, Ore. A.B. (U. of Oregon) '16.
 §Dismond, Henry Binga, *sp*, Chicago. S.B. '17.
 *Duiker, Henry, *s, a, w*, Grand Rapids, Mich. A.B. (Hope C.) '15.
 **Dykstra, Nicholas, *a, w, sp*, Chicago. S.B. '17.
 Ecke, Dodo Hobert, *w, sp*, Chicago. S.B. '17.
 ‡‡Edmisten, Loyd Lewis, *s, a, w*, Eddyville, Neb. S.B. (U. of Nebraska) '17.
 **Egbert, Ivan, *s, a, w*, Logan, Utah. S.B. '17.
 Elder, James Clyde, *s, a*, Tarkio, Mo. S.B. (Tarkio C.) '05.
 **Eldridge, Charles Judson, *s, a, w*, Topeka, Kan. S.B. '16; S.M. '17.
 **Farisy, Arthur Thomas, *s, a, w*, Franklin, Minn. S.B. (U. of Wisconsin) '17.

- **Feinberg, Samuel Maurice, *s, a, w*, Watertown, Wis. S.B. (U. of Wisconsin) '17.
 **Fink, Emanuel B., *a, w, sp*, Chicago. S.B. '13.
 *Finnerud, Clark Wylie, *s*, Watertown, S.D. S.B. (U. of Wisconsin) '16.
 **Fischer, Clarence G., *s, a, w*, Peoria. A.B. (St. Viator C.) '13.
 †Freidell, Hugh Fredrick, *s, a, w*, Dorchester, Neb.
 **Gallagher, William John, *w, sp*, Chicago. S.B. '18.
 **Gamble, Richard Cotter, *s, a, w*, Chicago. S.B. '17.
 **Garlock, Dewitt, *sp*, Wells, Minn. S.B. '17.
 **Gernon, John Henry, *s, a, w*, Kankakee. S.B. '17.
 **Gibson, Harrison Milton, *sp, a, w*, Havana, N.D. S.B. (U. of South Dakota) '17.
 **Graham, Robert Hugh, *sp*, Monmouth. S.B. (Monmouth C.) '15.
 Graven, Philip Siguard, *a, w, sp*, Chicago. S.B. '17.
 **Grogan, Robert Earl, *sp*, Dallas, Tex. A.B. (Baylor U.) '16.
 *Groom, Horace Ensign, *s, a, w*, Kennewick, Wash. A.B. (Morningside C.) '07.
 ††Gumbiner, Benjamin Franklin, *s, a, w*, Belle Plaine, Iowa. S.B. '17.
 *Halenbeck, Philip Luther, *s*, Duluth, Minn. U. of Minnesota.
 Hall, Alice Kassie, *a*, Chicago. A.B. (U. of Wisconsin) '13.
 *Hammond, Aldace Walker, *s, a*, Grinnell, Iowa. S.B. '15.
 Hardy, Frances Mabel, *a, w, sp*, Altoona, Kan. A.B. (U. of Kansas) '17.
 Hauser, Irma, *a*, Chicago. S.B. '16.
 †Haynes, Stanley Hewitt, *s, w, sp*, Minneapolis, Minn. S.B. (U. of Minnesota) '15.
 **Hibbs, William George, *s, a, w, sp*, Chicago. S.B. (Franklin C.) '15.
 **Hogeboom, George Washington, *s, a, w*, New Orleans, La. S.B. '16.
 **Holcomb, Blair, *s, a, w*, Portland, Ore. S.B. (U. of Oregon) '15.
 Horral, Onis Harrison, *sp*, Cannelburg, Ind. A.B. (Indiana State Normal S.) '13.
 **Houloose, James, *w, sp*, Kalamazoo, Mich. Kalamazoo C.
 **Hubbard, John Clark, *sp*, Willard, Utah. S.B. '17.
 Huber, Harry L., *s*, Mattoon. M.S. '16; Ph.D. '17; S.B. '17.
 Hunter, Alice Mary, *s, a, w*, Grand Forks, N.D. A.B. (U. of North Dakota) '14.
 *Huntington, Earl D., *s, a, w*, Chicago. S.B. '15.
 **Hyslop, Robert James, *s, a, sp*, Madison, Wis.
 **Isaacs, Harry J., *s, a, w*, Chicago. S.B. '17.
 **Jensen, Viggo Wilhelm, *a, w, sp*, Lakewood, Mich. A.B. (Illinois C.) '15.
 Jenson, Conrad Heber, *s, a, w*, Bear River, Utah. Utah Agricultural C.
 Johnson, Broer Rollo, *s, a, w*, Cadillac, Mich. A.B. (Augustana C.) '15.
 **Jones, Thomas D., *s, a, w*, Aberdeen, S.D. A.B. (U. of South Dakota) '17.
 **Kahn, Julius, *w, sp*, Chicago. S.B. '17.
 **Kaliski, Sidney Richard, *s, a, w*, Chicago. S.B. 17.
 **Kiel, Lee H., *s, a, w*, Sioux Center, Iowa. S.B. 16.
 **Kiley, William Earl, *s, a, w*, Byron. S.B. (U. of Wisconsin) '17.
 King, Allan Bruce, *s, a, w*, Chicago. S.B. '17.
 **Kostal, Frank, *a, w, sp*, Chicago. S.B. '17.
 ††Koucky, John Douglas, *sp*, Ledgerwood, N.D. S.B. '16.
 Kristensen, William Ambrosius, *sp*, Chicago. S.B. '18.

- ††Lanphere, Grant Harold, *s, a, w*, Gresham, Neb. S.B. (U. of Nebraska) '17.
- **Larson, Ernest Eric, *s, a, w*, Scandia, Kan. S.B. '17.
- *Laval, John, *s*, Chicago. S.B. '16.
- **Lee, James Edward, *a, w, sp*, Chicago. S.B. '16.
- ††Levey, Harry Barney, *s, a, w*, Gary, Ind. A.B. (U. of Indiana) '16.
- **Lindem, Martin Carl, *s, a, w*, Fisher, Minn. A.B. (U. of North Dakota) '17.
- *Lowe, Cecil Evan, *s, a*, Charles City, Iowa. A.B. (Washburn C.) '13.
- **Lundy, John Silas, *s, a, w*, Inkster, N.D. A.B. (U. of North Dakota) '17.
- *McKenzie, Pierce, *s*, Elwood, Iowa. S.B. '16.
- **McMurray, Frederick Arnold, *a, w, sp*, Seattle, Wash. A.B. (U. of Washington) '15.
- **Magaret, Clarence William, *s, a, w*, Peoria. S.B. '17.
- **Meeker, William Raymond, *s, a, w*, Hazel Dell. S.B. '15.
- **Meyn, Arthur Wesley, *s, a, w, sp*, Chicago.
- **Milligan, Jay McDonald, *a, w, sp*, Olathe, Kan. A.M. (U. of Kansas) '17.
- *Myers, Merrill Maitland, *s*, Glenwood, Iowa. S.B. (Des Moines C.) '13.
- ††Naylor, Eugene Fay, *a, w, sp*, Springfield. S.B. '18.
- **Nelson, Karl Magnus, *s, a, w*, Chicago. S.B. '17.
- **Nickelsen, William Donald, *s, a, w*, Hood River, Ore. S.B. '17.
- **Nienow, Alfred, *a, w, sp*, Northfield, Minn. S.B. (Carleton C.) '13.
- **Nisbet, Oliver Martin, *a, w, sp*, Dufur, Ore. S.B. (U. of Idaho) '15.
- **Numbers, Joseph Reno, *a, w*, Boise, Idaho. S.B. '17.
- ††O'Bannon, Roscoe Paul, *sp*, Buffalo, Mo. S.B. '17.
- **Oberhelman, Harry Alvin, *sp*, Randolph, Kan. S.B. (Northwestern C.) '16.
- *O'Toole, Tom Francis, *s*, Independence, Iowa. Creighton C.
- **Parker, Leon Vasco, *s, a, w, sp*, Minot, N.D. A.B. (Bowdoin C.) '06.
- Patton, Halford E., *a, w*, Chicago. S.B. '16.
- *Pearsall, Clifford J., *s, a*, Evansville, Wis. S.B. (Beloit C.) '14.
- *Peters, Albert Grover, *s, a*, Gibson City. S.B. '16.
- Pfunder, Malcolm C., *sp*, Greenwood, Wis. Senior C.
- **Phillips, Harold Edward, *s, a, w*, Chicago. S.B. (U. of Wisconsin) '17.
- **Pittenger, Earl Alexander, *a, w, sp*, Hart, Mich. S.B. '18.
- Platt, Josephine E., *a, w*, Fargo, N.D. S.B. '18.
- **Pond, Gilbert Palmer, *a, s, w*, Chicago. S.B. (Pennsylvania State C.) '15.
- **Poppens, Peter Heije, *s, a*, Tea, S.D. S.B. '17.
- **Portogallo, Henry Salvatore, *w, sp*, Chicago.
- *Powers, Henry Robert, *s*, Emmetsburg, Iowa. A.B. (U. of Iowa) '15.
- **Profant, Henry James, *s, a, w*, Chicago. S.B. '17.
- Psota, Frank Joseph, *s, a, w, sp*, Chicago. S.B. '17.
- **Rainey, Edward Carlisle, *s, a, w*, Glendive, Mont. S.B. (U. of Wisconsin) '17.
- **Rawlins, Ora Anson, *sp*, Aurora. A.B. (U. of Indiana) '01; A.M. (*ibid.*) '07; A.M. (Columbia U.) '14.
- ††Reed, Howard William, *s, a, w*, Rhinelander, Wis.
- **Reeve, Roscoe Hulen, *s, a, w*, Edwardsport, Ind. S.B. '17.
- **Reinertsen, Bernhard Reynold, *a, w, sp*, Elk Point, S.D. A.B. (Augustana C.) '14.
- **Rich, Ciney, *sp*, Birds. S.B. '18.

- **St. Germain, Albert Leo, *w, sp*, Chicago. Northwestern U.
 **Sandock, Isadore, *s, a, w*, South Bend, Ind. S.B. '17.
 Scheftel, Yetta, *sp*, Chicago. A.M. (Northwestern U.) '07.
 Schlesinger, Ethel R., *s, a, w*, Chicago. S.B. '13.
 **Schultz, Carl Emil, *s, a, w*, Oak Park. S.B. '17.
 *Severeide, Albert Larson, *a*, Sutherland, Iowa. A.B. (Grinnell C.) '15.
 **Sherman, Hal W., *s, a, w*, Buffalo, Kan. A.M. (U. of Kansas) '17.
 **Smith, Clarence, *s, a, w*, Lawrence, Kan. A.B. (U. of Kansas) '15; A.M. (*ibid.*) '16.
 Smith, George, *sp*, Hoople, N.D. A.B. (U. of North Dakota) '16.
 *Soper, Fred Lowe, *s, a*, Hutchinson, Kan. A.M. (U. of Kansas) '16.
 **Stanton, Robert Hitz, *s, a, w*, Madison, Ind. S.B. '17.
 Stephan, Carl Thompson, *a, w, sp*, Chicago. S.B. (U. of Wisconsin) '17.
 Stevenson, Frank Woodford, *s*, Crosby, Minn. A.B. (U. of North Dakota) '16.
 Stieglitz, Hedwig, *w, sp*, Chicago. S.B. '17.
 **Stone, Merlin J., *sp*, Ogden, Utah. S.B. (Utah Agricultural C.) '14.
 **Studer, Edward Franklin, *a, w, sp*, Chicago. S.B. '17.
 Sturges, Mary Mathews, *a, w*, Winnetka. S.M. (U. of Michigan) '96.
 **Sutherland, George Fred, *a, w, sp*, Grand Island, Neb. A.B. (U. of Illinois) '13; A.M. (*ibid.*) '14.
 Taglia, Vito Antonio Desolato, *s, a, w*, Chicago. S.B. '17.
 **Theobald, John Joseph, *s, a, w*, Chicago. S.B. '17.
 **Thompson, Raymond Charles, *s, a, w*, Fayetteville, Ark. S.B. (Kansas State Agricultural C.) '08.
 **Tippin, Ernest Elwood, *s, a, w*, Sterling, Kan. A.B. (Cooper C.) '12.
 Tongs, Ming Sing, *s, a, w*, Kiangsu, China. S.B. (Kentucky U.) '15.
 ††Traut, Eugene Fagen, *s, a, w*, Fond du Lac, Wis. S.B. '17.
 **Tupper, Warren Ernest, *s, a, w*, Madison, Wis. S.B. (U. of Wisconsin) '17.
 **Van der Velde, Otto, *s, a, w*, Emporia, Kan. A.B. (Hope C.) '15.
 **Vrtiak, Emil, *s, a, w*, Chicago. S.B. (U. of Illinois) '17.
 Wagner, Louise Dorothy, *a, w, sp*, Chicago. S.B. '17.
 **Waldo, Proctor Cook, *s, a, w, sp*, Peoria. S.B. '17.
 **Walters, Henry Waltman, *s, a, w*, Evanston. S.B. (Dartmouth C.) '17.
 **Warden, Ralph Herbert, *s, a, w*, Lyons, Kan. S.B. '17.
 **Weinberg, Abraham Joseph, *w, sp*, Chicago. Senior C.
 **Westgate, Clyde James, *a, w, sp*, Crandon, Wis. S.B. (U. of Wisconsin) '17.
 White, Adeline Rawson, *sp*, Chicago. A.B. '99.
 **Whiteley, Philip Wade, *s, a, w*, Bonaparte, Iowa. S.B. '17.
 Wien, Max Samuel, *s, a, w*, Chicago. S.B. '17.
 ††Wilcox, Henry Slater, *s, a, w, sp*, Little Falls, N.Y. A.M. (Harvard U.) '11.
 **Williams, Chester Henry, *s, a, w*, Ironwood, Mich. S.B. '17.
 Williams, Delon Acree, *s*, Murray, Ky. S.B. '15.
 **Williams, J. Lislie, *s, a*, Chetopa, Kan. A.B. (U. of Kansas) '15.
 Wong, Heung Yun, *a, w, sp*, Kwangtung, China. S.B. '16.
 **Wooll, Gerald Kelley, *s, a, w*, Madison, Wis. S.B. (U. of Wisconsin) '17.

SUMMARY OF ATTENDANCE FOR THE YEAR 1918-19

	Men	Women	Total
Freshmen and Sophomores.....	274	41	315
Special students	136	61	147
Juniors	164	14	178
Seniors	161	13	174
Practitioners	35	2	37
Total, less duplicates	667	120	787

